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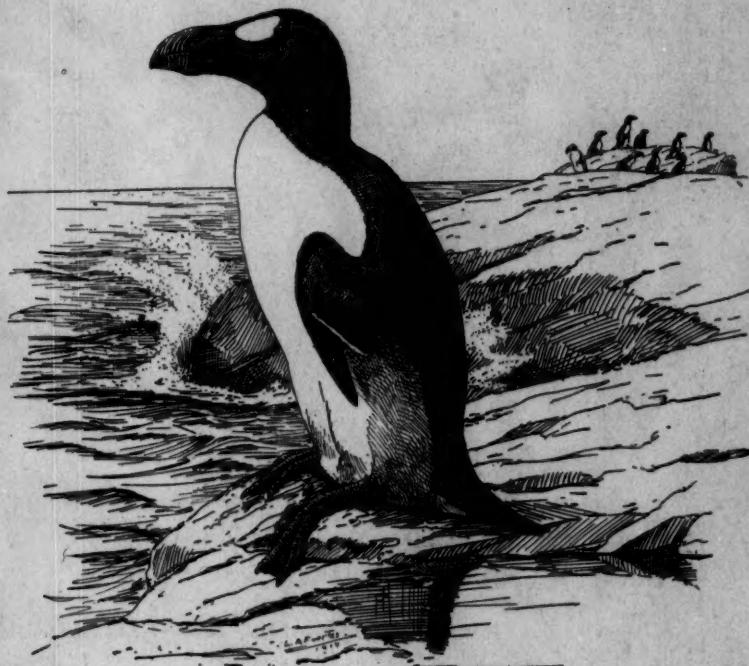
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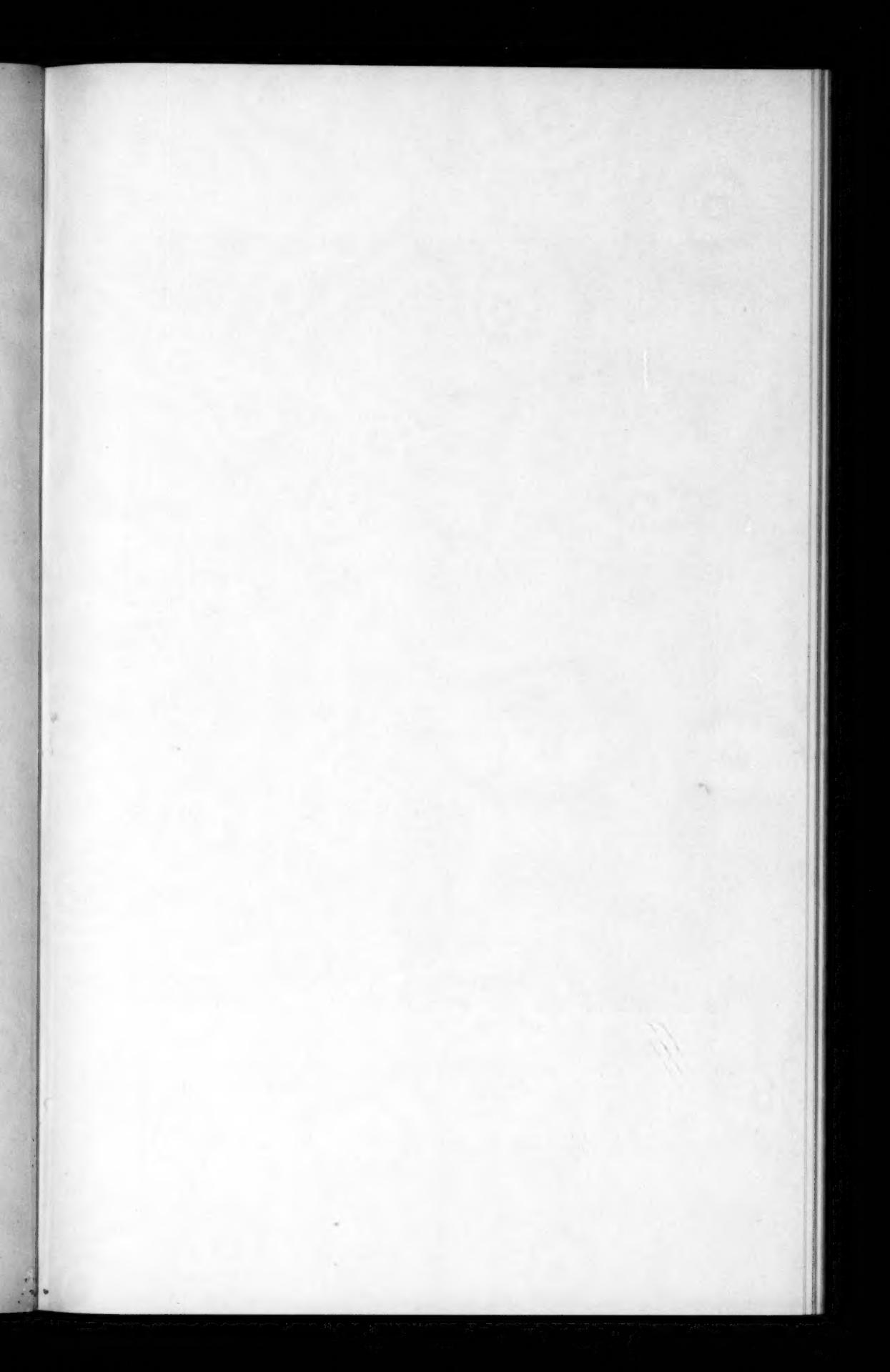
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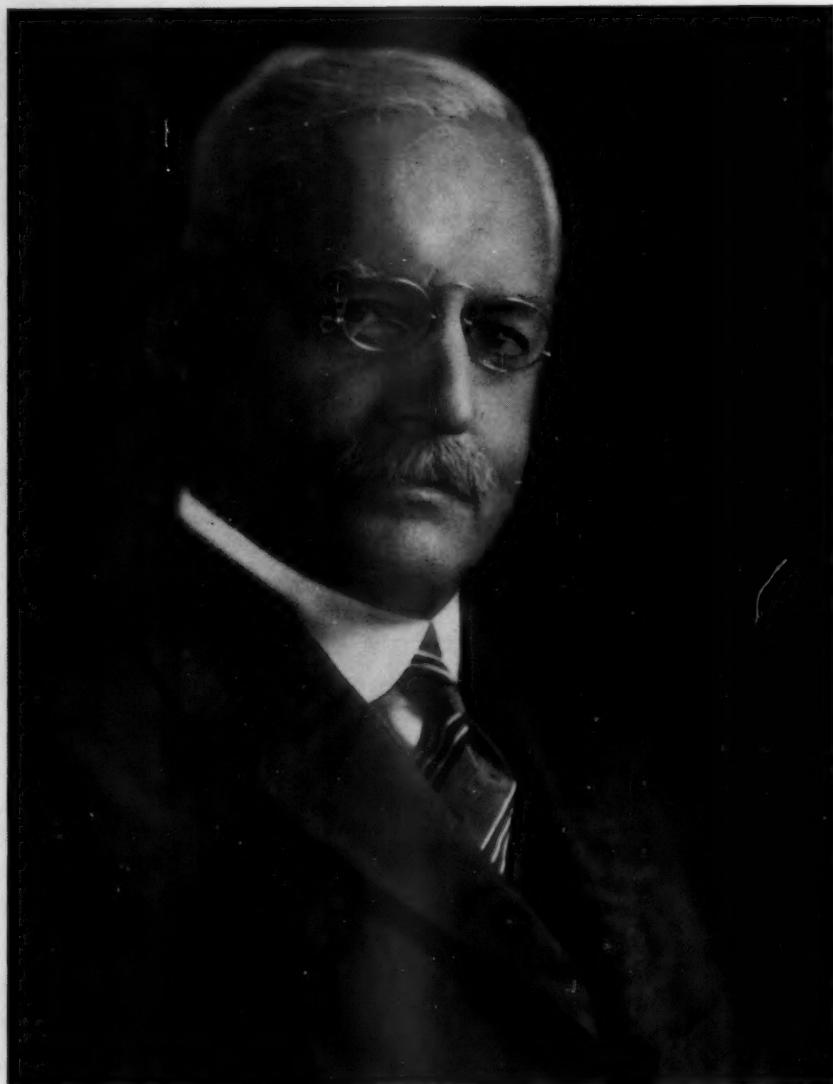
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PLATE VII.



E.W. Nelson

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EDWARD WILLIAM NELSON—NATURALIST,¹

1855–1934.

BY EDWARD A. GOLDMAN.

Plate VII.

EDWARD WILLIAM NELSON was an outstanding member of a distinguished pioneer group, one who lived to link the past with the present—a man who was not merely a specialist in ornithology or mammalogy, or completely classifiable as a zoologist, a botanist, or even as a biologist, but one who essentially combined all these branches—a naturalist in the widest sense. Living things and natural phenomena of all kinds held for him an absorbing interest that never flagged.

Endowed with a restless energy that scarcely permitted him to pause short of exhaustion, his greatest satisfaction was in achievement. Unfortunately, through failing health early in life, he became a victim of his own driving force. Through sheer determination, however, he was largely able to force physical handicaps into the background, until near the end, which came rather suddenly in his 80th year; and even then he was planning further work with the same enthusiasm and optimism as of old. Such qualities of mind, combined with unusual opportunities, made for an incomparably richer life in many directions, than falls to the lot of most men.

A Fellow and Past President of the American Ornithologists' Union, Nelson was perhaps most widely known as an ornithologist, but was scarcely less noted for his field and published work on mammals and as a wild-life administrator. He also served as President of both the American Society of Mammalogists and the Biological Society of Washington. His scientific explorations during more than 20 years embraced a life of adventure in many regions, from the far North to Central America, and included ascents of the highest mountains of the continent south of Alaska. His very large

¹ Read at the Fifty-second Stated Meeting of the American Ornithologists' Union, Chicago, October 23, 1934.

collections of birds and mammals, and his notable accumulations of specimens of fishes, reptiles, amphibians, insects, and plants, attest the wide range of his interest in natural history. From these collections, gathered for the most part in almost unknown territory, he and others described new genera and hundreds of species and subspecies new to science. He was also the author of monographs and many articles dealing with wild-life conservation.

Nelson was a man of strong convictions, with a somewhat brusque manner, and a simple directness sometimes disconcerting to his associates, and not always pleasing to others on short acquaintance. As a result of this unfortunate mannerism comparatively few really came to know him well, but those who did, became deeply appreciative of his essential kindness, his peculiar genius, and the sterling qualities of his mind and heart. Enduring friendships were the natural result.

In appraisal of one of Nelson's books, 'Wild Animals of North America,' Theodore Roosevelt wrote that the author was "one of the keenest naturalists we have ever had and a man of singularly balanced development." Strongly imbued with an innate love of wild-life, he labored for its development and utilization as a great national resource.

Among Nelson's salient characteristics were tremendous energy, curbed only by ill health, which, however, was largely counteracted by a cheerful optimism; marvelous courage; and a tenacity and determination that carried him past death's door many times. In his passing we have lost one whose dynamic personality and record of achievement should always be an inspiration to other workers in Nature's laboratory.

Edward William Nelson was born in the small village of Amoskeag, near the Merrimac River, a short distance north of Manchester, New Hampshire, May 8, 1855. He was the eldest son of William and Nancy Martha (née Wells) Nelson. His parents were both of old English stock that came to New England before the Revolution.

He led the life of a normal boy, but was always interested in the out-of-doors. In unpublished reminiscences he recorded his earliest recollection as a vivid mental picture of sweeping green meadows leading down from his home to the bank of the river. Later the family, which included his parents and a younger brother, moved to Manchester. The greatest adventures of those days were on the occasions when a small boy friend produced a long bamboo pole with line and hook and a can of squirming fish worms. With an eager group of half a dozen other youngsters he would hurry to the bank of a reservoir to fish for the diminutive "bull pouts" inhabiting its placid waters. After much wrangling on the first trip the fishing was organized and the owner of the pole held it until he had a "bite." Then, regardless of whether any fish came out with the frenzied jerk that

threw the hook high in the air, the pole was surrendered to the next boy and so on around, each being given his opportunity. The privilege of re-baiting the hook with one of the worms was also given in rotation. The indescribable joyous excitement of those hours lingered in his memory and was quite out of proportion to the little victims captured.

Then came the beginning of the Civil War, and his father, swept away on the high tide of patriotic enthusiasm, departed with many others as a private in a local regiment. A year later, the desire of his mother to do her part in the War became so strong that Edward, then seven years of age, and his younger brother Fred were taken to live with her parents on a little farm in the northern Adirondacks, in Franklin County, New York. Leaving the boys with their devoted grandparents Mrs. Nelson went to a hospital in Baltimore, where she helped mend many shattered wrecks sent in from the battlefields.

Meanwhile the boys, with the usual adaptability of children, had fitted easily into the primitive life then current on the small, rock-studded farms of the region. In Edward's own words "We found ourselves transferred from the narrow confines of city streets to a delightful new world full of cattle, sheep, horses, and other living things, and surrounded on all sides by wide landscapes of field and forest, reaching to mysterious horizons that appeared limitless in extent." As the years passed he began to take part in the general work about the place. After the timber was removed came the hard task of gathering the granite boulders and smaller stones that glacial times had sowed too plentifully in and on the soil. The removal of the stones was a laborious process, and he says: "When I was about twelve years old it became one of my tasks to help in this, and many nights saw the tips of my fingers raw and oozing blood from the abrasion of the rough surfaces of stones that had to be pulled from their beds in the surface of the soil. Nothing was thought of this as it was one of the ordinary incidents to be expected in forcing these reluctant acres to provide for human needs." On this rocky New York farm he undoubtedly received training in hardihood of great value in preparation for the life he was to lead in after years. His recollections, however, were not of hardships but of incidents of particular interest.

It was about this time that young Nelson began to feel the impulses that started him on his long career as a naturalist. Fortunately, we have his own reminiscent portrayal of the setting: "I can never forget my first 'blueberrying' party. It was my first excursion into a great wilderness and gave me my first taste of camp life. The long drive took us through miles of beautiful, untouched forest of mixed hardwoods and conifers among which the majestic white pines in all their glory were dominant. Since those days the lumberman's axe has swept those beautiful conifers almost

clean except for a few poor individuals, unfit for lumber, and a host of young growth that is now coming forward.

"During our first day we entered a low, mountainous, upland country where we crossed many small streams, and had glimpses of beautiful, small lakes, embowered to the water's edge in the forest that clothes all the varying contours of the landscape. As evening approached we arrived on the uninhabited shores of Loon Lake, now a great summer resort famous for its picturesque beauty. All day I had been in an enchanting new world to which every fiber of my being responded. The exquisite beauty of the lake as the sun went down and night crept over the forest was beyond expression, and the wild, loud call of the Loon cleaving the twilight silence seemed to voice the spirit of this remote place.

"The next morning we moved on and passed the group of log buildings that made Paul Smith's primitive hunting camp, of which no trace can be found in the present-day elaborate resort. That afternoon we were on the open, treeless barrens where blueberry and other low bushes covered much of the ground, with scattered patches of poplars and other small trees here and there. Our party promptly erected a lean-to, covered on the back and sides with the tops of young poplars growing abundantly in a patch nearby. Beneath this shelter a springy couch of the same material was covered with our blankets and made a delightful resting place. No other tree in the north makes such a beautiful camp of this kind, the clean pale bark and the lovely mass of gracefully shaped leaves form a most attractive picture. That night I was thrilled with joy to hear the patter of raindrops on the leafy roof overhead as passing showers moved across the barrens.

"This first contact with the wilderness still remains among my most inspiring memories. I have always believed that my response to the wild surroundings on this little journey awakened in me a subconscious mental urge that in later years developed into a hunger to visit wild, unspoiled places both near and far."

For six or seven years Edward attended school in a one-room building at the cross-roads near his Adirondack home. His chief recollections of those early school days were of the incompetent teachers, despite whose shortcomings he learned to read, write, do simple arithmetic, and to know a little geography.

His father was killed at the end of the War and his mother opened a small dressmaking establishment in Chicago. Endowed with a pleasing personality, energy, and an artistic appreciation of color values, she soon became very successful. In the fall of 1868, when Nelson was thirteen years old he entered a public school on the "North Side." At that time Chicago was like a great sprawling country town, mainly of detached wooden buildings. There were rows of fine shade trees, small vegetable

gardens, and many flowers. Owing to its conspicuous greenery, Chicago was then called the "Garden City," in marked contrast with more modern appellations. The broad sandy shore of Lake Michigan lay only a few blocks from the boy's home and became one of his favorite haunts.

From the fall of 1868 to early 1871 Nelson often accompanied boy friends who possessed shot guns on Saturday hunting trips into areas now well within the city. Game-law enforcement was lax and he confessed that, in response to a keen hunting instinct, he and his companions killed everything wearing feathers above the size of Warblers. Among their victims were Bluebirds, Robins, Brown Thrashers, Flickers and other Woodpeckers, Nighthawks, Rose-breasted Grosbeaks, Scarlet Tanagers, and others. He thus developed an interest in birds, however, which became more definite when in 1870 he made the acquaintance of Robert P. Clarke, a school companion who had a collection of about twenty-five mounted specimens, and small editions of Nuttall's and Wilson's books on birds. These were the first bird books he had ever seen, and they gave a strong impetus to his desire to learn more about the creatures he had found so fascinating. He lost touch with Clarke, but always held him in high regard as being responsible for his making a beginning as a serious student of birds.

At that time he had an intense desire to learn how to skin and prepare birds for a collection. He tried to skin a Screech Owl, but at the end of about two hours it was such a featherless object that he gave up any further attempts until he could find a teacher.

One day in the spring of 1871 he was attracted by the varied forms and colors of beetles that had fallen into the lake, the dead bodies of which, cast up by the waves, formed a dark line along the shore. With his characteristic interest in all forms of life he began to pick up one of each kind. An entomological collector, a Mr. Mead, of New York, happened to be working along the beach and stopped for a friendly talk. Before parting he gave the boy a small supply of insect pins and showed him how to use them. Young Nelson was delighted with the new subject of interest and during the next few months hundreds of beetles and other insects were pinned in orderly array in his boxes. Mr. Mead was to identify them, and the boy appeared to be on the way to become an entomologist. Fate, however, ordained otherwise.

The night of October 9, 1871, the boy, with his mother and brother were made homeless by the great Chicago Fire. With a few belongings, including his precious insect boxes, which he had tied together and carried in one hand, they were forced to leave the house hurriedly. Moving with a broad stream of refugees, he placed his package of boxes on the ground, only for a moment unguarded, but long enough for it to be stolen. This mishap cut short his development as an entomologist.

Nelson's mother had lost nearly everything in the fire, but a temporary home was found and with great courage and energy she soon managed to reestablish her business. Learning of the boy's intense desire for a shot-gun a friend presented him with his first one, a muzzle loader, and his major interest turned again to birds.

About this time Nelson came to know Charles H. Holden, a young amateur ornithologist, who, with the assistance of Charles E. Aiken, had built up a collection of several hundred mounted birds. Aiken had moved to Colorado, where many years later Nelson was to meet him. At Nelson's urgent request, and for a monetary reward of ten dollars, Holden taught him to skin and, after a fashion, to mount birds. Holden married and became a Chicago business man, but his pupil immediately launched on his long and active career as an ornithologist.

In the spring of 1872 Nelson entered the Cook County Normal School, and regularly spent his Saturdays and holidays in the collection and study of birds. One day he shot some Wilson's Phalaropes in a marshy area on the prairie a short distance from Englewood. The weather was extremely warm and the birds began to decay before they could be skinned. Working to save them in a closed room he contracted a curious form of blood poisoning. The doctor thought his best chance of recovery lay in spending several months in the dry, elevated region of the Rocky Mountains. By an odd coincidence Samuel Garman, afterwards well known as an ichthyologist and herpetologist in the Museum of Comparative Zoölogy, Cambridge, Massachusetts, was on his way west to join Professor E. D. Cope for a field trip in search of fossils in the Badlands of Wyoming. The principal of the Normal School, W. W. Wentworth, had arranged for his son Will to accompany Garman, and Nelson was included in the party. The boys were each to pay their own way and were to profit by their association with the scientists.

The party joined Professor Cope at Fort Bridger, and Nelson began the varied field experiences that were to take him, during his maturer years, to many remote parts of the continent. He found Professor Cope friendly, possibly due in part to the fact that he exhibited a keen interest in assisting the latter in the collection of fossils. Cope was especially pleased one day when Nelson brought, in fragments, the carapaces of two extinct species of turtles, sketches and descriptions of which were promptly forwarded for publication.

Nelson's major interest, however, was in the new and strange birds of the region, and he regretted very much having left his gun behind. Professor Cope, who was interested in many branches of science, loaned him a cane gun that fired a percussion cap. He told Nelson that he had begun his scientific career as a bird student, and that he used this little gun in

collecting specimens in West Virginia. It proved to be a somewhat temperamental weapon, when fired, with a vicious recoil apt to result in a bloody nose. But with it a small collection of birds was accumulated.

Owing to some disagreement between Cope and Garman the latter announced that he would leave at once and go on to Salt Lake. Young Wentworth had left home in company with Garman and felt impelled to continue with him. Professor Cope urged Nelson to remain with him, making various offers of assistance in his future career as a naturalist, but Nelson felt bound to go with his friend. From Fort Bridger they proceeded to Salt Lake Valley, where they found a stopping place with a Mr. Sessions, one of the Mormon pioneers, and remained there from July 27 to August 8, 1872. The place known at that time as "Sessions Settlement" was on the highway from Salt Lake City to Ogden. Obtaining a second-hand shot gun, Nelson continued the collection of birds. While there he visited the shore of Great Salt Lake, where great numbers of White Pelicans, Gulls, Avocets, and other birds new to him, presented a very wonderful sight to his inexperienced eyes. From Salt Lake Valley the party proceeded to Elko, Nevada. Here a few days were spent by Nelson in collecting birds along the Humboldt River; and near here for the first time he witnessed birds congregating at the watering places, so characteristic of such locations in the desert. Hundreds of Mourning Doves came in from all directions and joined with the other birds of the surrounding sage-brush, forming a most animated scene. About August 15 the party proceeded westward to Nevada City, California, where an uncle of young Wentworth had a ranch. Here Nelson and his friend Wentworth remained for some time while Garman continued to San Francisco. The Wentworth ranch among the oaks near the lower border of the yellow-pine and sugar-pine belt gave excellent opportunities to study the birds of the middle slopes of the Sierra Nevada. There Nelson became acquainted with the acorn-storing habits of the California Woodpecker and the California Jay, and among other birds he found noteworthy was the White-headed Woodpecker. While his interest was at this time centered in birds, his attention was attracted by the rock squirrels (*Citellus beecheyi*), which abounded on the hillsides, and the large gray pine squirrel (*Sciurus griseus*). He also learned of the abundance of tree foxes (now *Urocyon californicus*), as they were called, owing to their habit of taking refuge in trees when hunted with dogs. But he had not yet begun the collection of mammals, which were to become one of his major interests later in life, and thus the gray fox remained unknown to science for many years.

In December Nelson and Wentworth made a short visit to an uncle of the latter in Oakland, where Nelson had an opportunity to see the bird life on the marshes about the eastern shore of San Francisco Bay and at Lake

Merritt. Oakland was at that time a small suburban place, and Lake Merritt was virtually in the country. In passing through the marshy sections and wheat fields of the Sacramento Valley he was thrilled by the sight of what appeared to be millions of Snow, White-fronted and Canada Geese.

Early in January of the next year (1873), Nelson returned to Chicago and resumed his studies at the Cook County Normal School. The collections made during his western trip were purchased, and formed the beginning of the Normal School Museum. Professor W. W. Wentworth, the Principal of the School, encouraged Nelson's interest in natural history and he continued to devote most of his spare time to collecting and studying birds. At the suggestion of Professor Garman, Nelson wrote to Dr. J. A. Allen, then of the Museum of Comparative Zoölogy, and the correspondence was the beginning of a life-long friendship between the two men, both of whom for many years were to enrich the sciences of ornithology and mammalogy. Allen identified many of his birds and named the first new species taken by him *Ammodramus nelsoni*. The specimens of this Sparrow were taken in the marshes bordering the Calumet River in what is now South Chicago.

During this period Nelson accumulated the information that appeared in some of his earliest papers. One of these, 'Additions to the Avifauna of Illinois,' was published in the 'Bulletin of the Nuttall Ornithological Club' in July, 1876, when he was 21 years of age. This was followed by his 'Birds of Northeastern Illinois,' which appeared in the 'Bulletin of the Essex Institute' in April, 1877.

While walking along the lake shore one day in the summer of 1874 Nelson met Dr. Stephen A. Forbes, of the State University Museum, Urbana, Illinois. Forbes was collecting fishes, and he and Dr. David Starr Jordan for a time succeeded in interesting Nelson in these aquatic creatures. As a result of this digression he published a partial list of the fishes of Illinois and described several new species.

Birds, however, were not long neglected. After graduation from the Normal School, Nelson was joined by a youth of his own age, Fred T. Jencks, of Providence, Rhode Island, and they spent most of the summer of 1875 on collecting trips. As a result of correspondence with Robert Ridgway, they visited Mount Carmel, Ridgway's birthplace, where the boys were hospitably received by his parents and spent more than a month exploring the wonderfully wooded bottom lands along the Wabash River.

In the autumn of 1875 Nelson attempted to obtain a position as a school teacher. While awaiting the results of various applications he entered Northwestern University at the opening of the fall term. Before the expiration of the term, however, he accepted a position as teacher of a

school at Dalton, on the Calumet River, south of Chicago. While teaching, his spare time was devoted to collecting and studying birds. He drew no inspiration from his experience as a teacher, however, and at the end of the school year decided to seek an opportunity to do field work as a naturalist.

In the fall of 1876, Henry W. Henshaw, with whom he had been corresponding, stopped over in Chicago on his way to Washington from a field trip on one of the Wheeler expeditions. Henshaw's visit, and the encouragement he gave, intensified Nelson's desire to become a field naturalist. Henshaw suggested that he go to Washington, and offered to try to enlist the interest of Spencer F. Baird, Assistant Secretary of the Smithsonian Institution, in his behalf. Accordingly, in December he went to Washington, where he met Professor Baird and found him most friendly and sympathetic. Though he could offer no immediate employment, Baird expressed the hope that there might be an opportunity for him to go into the field in the near future. He also met Robert Ridgway, whom he found a delightful companion, and these two immediately became life-long friends.

To improve his time while waiting for an opening, he entered Johns Hopkins University, Baltimore, for a special course in biology under Professor W. K. Brooks. In March he learned of an opportunity to go to Alaska. Professor Baird informed him that L. M. Turner, who for nearly five years had been weather observer in the Signal Corps of the U. S. Army, was to return at the end of his period of enlistment. Turner had been able, in spare time, to make natural history collections, and Baird offered to recommend Nelson to Gen. W. B. Hazen, Chief of the Signal Corps, for the post. It would require enlistment as a private in the Corps, but so eager was he to get into the field in some remote region that he readily agreed. Accordingly he was enlisted and ordered to Fort Myer, Virginia, for training. There for a month he received instructions in reading instruments and recording weather observations. When he first arrived his status was that of an ordinary recruit, and besides the regular drill he was required to do guard duty and other routine work. On his first Sunday he was detailed as one of the kitchen police. While busily engaged in the latter duty he was surprised to see Henshaw, Ridgway, and another friend walk in. Their amusement was unbounded as they congratulated him, effusively, on the high position he had attained. But Nelson lacked enthusiasm for the school of the soldier and was soon excused from military duty.

On April 25, 1877, Nelson sailed from San Francisco on the Alaska Commercial Company's steamer *St. Paul*. As the ship passed out of the Golden Gate he looked forward with eager and romantic anticipation to the mysterious land in the far North. He had a stormy voyage to the Aleutian Islands, but saw many sea birds, including the Albatross, and other marine life of great interest to him. At Unalaska there was delay of

several weeks and he was transferred to a schooner. Meanwhile he took advantage of an opportunity to visit Sanak Island on a small vessel carrying Aleut hunters to the island, which was a favorite hunting ground for sea-otter. This trip narrowly missed ending in shipwreck. Arriving at St. Michael, Alaska, on June 17, 1877, he remained there until the end of June, 1881, except for excursions to various parts of the surrounding country, mainly with dog sledges, in winter. Always keenly observant of everything about him, Nelson became interested in the life and customs of the Eskimos, and it was mainly during these winter journeys that he collected ethnological data unsurpassed in richness and variety, which he embodied in his published work, 'The Eskimo about Bering Strait.'

At the close of June, 1881, the revenue steamer *Corwin*, under the command of Captain C. L. Hooper, called at St. Michael on her way north in search of the missing arctic exploring ship *Jeannette*. By special arrangement Nelson was taken on board as naturalist of the expedition. The coast of Siberia was skirted from Plover Bay to North Cape, and a stranded party was rescued. The captain had been instructed to land Nelson on St. Lawrence Island in order that he might investigate the depopulation of the native villages by disease and famine during the two preceding winters. Much data and a valuable series of ethnological specimens were obtained there. During the remainder of the season he visited all the Arctic coast of Alaska from Bering Strait to Point Barrow, including Kotzebue Sound. The expedition was the first to scale the cliffs of Herald Island, and the first to reach the ice-bound shores of Wrangell Island, so long discussed by geographers as a probable southern extension of an Arctic continent. Nelson returned to San Francisco on the *Corwin* at the end of October.

While for the time spent in the North, Nelson's ethnological work alone would have been a notable contribution to science, his activities covered a wide range, as attested by his reports on the natural history collections he made, published as No. 3 of the 'Arctic Series of Publications,' issued in connection with the Signal Service, U. S. Army, in 1887. The reports, prepared in collaboration with others, covered birds, mammals, fishes, and diurnal Lepidoptera.

The years spent in the far North were crowded with novel experiences, and Nelson always regarded them as among the most interesting of his long life. He experienced almost incredible hardships, and several times narrowly escaped losing his life. His life in Alaska marked a period when he was approaching his full intellectual powers, with robust health and boundless energy.

Too closely following an attack of pneumonia, however, on returning to Washington he applied himself with characteristic zeal to the preparation

of his report on the birds of Alaska. The sudden change to a sedentary life and long hours of close application in the climate of Washington, together with his impaired condition, gave the great white plague its opportunity. When the report was nearly finished pulmonary tuberculosis developed so rapidly that he was not expected to live. His mother took him to the White Mountains, Arizona, where at that time Apache Indian raids were still a hazard. They lived in a tent, and Nelson always attributed his final recovery to his mother's devotion and the curative skill she acquired as a Civil War nurse. But recovery was an exceedingly slow process and required years of extreme care. With slowly returning strength he began to walk a few steps and would shoot and prepare one or two bird specimens each day. Then he began to ride a horse short distances into the forest. Mule deer were numerous, but at first he was too weak to hold his rifle steadily. On a gentle horse he would raise the weapon to his shoulder, with considerable effort, and fire it in the direction of the deer without sighting. Most of the deer escaped, but occasionally one was killed. Meanwhile he and his brother had located homesteads in Milligan Valley in the White Mountains, northeast of Springerville, Arizona, where they established a cattle ranch. Eventually he was pronounced by physicians entirely free from tuberculosis, but due perhaps to overtaxing restricted lung space he later developed a functional heart ailment from which at times he suffered stoically for the remainder of his life. During this period he served a term as County Clerk of Apache County, Arizona. Owing to very limited financial resources, as well as uncertain health, his natural history studies were, for a time, much restricted in scope.

By 1890, however, he had recovered sufficiently to engage in general field work and received an appointment as Special Field Agent on the Death Valley Expedition under Dr. C. Hart Merriam, Chief of the Division of Ornithology and Mammalogy, U. S. Department of Agriculture. On this expedition the emphasis was on mammals, but birds, reptiles, amphibians, and plants also were collected. Nelson joined Vernon Bailey and began work at Keeler, California, on November 29, 1890. This was the beginning of the service that was to extend through the final stages of his career. Other members of the expedition with whom he became associated were Dr. A. K. Fisher, Dr. T. S. Palmer, Frank Stephens, B. H. Dutcher, Dr. Frederick V. Coville, and Frederick Funston (later Brigadier-General, U. S. Army). After spending some months in the desert region to the east, accompanied by Funston, Nelson crossed the Sierra Nevada with a pack outfit over a route on which there was no trail, descending to the floor of the Yosemite Valley. He proceeded to Visalia, California, where the Death Valley Expedition was disbanded on September 19, 1891. Nelson, however, was directed to continue on field work in California.

Purchasing a buckboard for hauling equipment including two 42-pound bear traps left over from the Death Valley Expedition, Nelson proceeded southward through the San Joaquin Valley, alone. At Alila (now Earlimart) he stopped for the night at a ranch belonging to the writer's father, with whom he talked of his desire to employ a teamster and camp man as soon as one suitable for this work could be found. Remembering my general interest in natural history father decided that this would be a fine opportunity for me to become associated with a man of such experience. Accordingly, he took the train to Fresno where I was employed in a large vineyard and persuaded me to return with him, although I was at first somewhat reluctant to do so as the prospect for advancement was good where I was, and my remuneration was to be considerably less. I had never seen specimens of mammals and birds prepared, however, and at once became keenly interested.

As a result of father's intercession I accompanied Nelson, starting southward from our ranch October 10, 1891. At this time Nelson was a black bearded young man of 36 and I a boy of 18. I was familiar with the use of traps and guns and immediately began collecting and assisting in the preparation of specimens. By mutual understanding the camp work was simplified as much as possible and collecting often took precedence over dish washing. Thus began a friendship and close association with Nelson that was to endure until his death.

About two months had been spent in field work mainly in the coast region in California when Nelson received instructions to proceed to Mexico for a trip of about three months. He offered to pay my expenses if I would accompany him. Anticipating wonderful experiences I readily agreed. We sailed from San Francisco on the Pacific Mail Steamer, *Acapulco*, and arrived at Manzanillo, Colima, on January 24, 1892. On Nelson's representations and Dr. Merriam's recommendation to the Secretary of Agriculture, I received my first appointment in the civil service as an assistant field agent on March 1 of the same year. The salary was small, but it relieved Nelson of the financial strain of my employment. The three months' trip was lengthened to an indefinite period. Our joint operations during 14 years in Mexico, interrupted from time to time by return trips to the United States, took us by rail, stage, steamer, or on horseback into every State and Territory in that Republic. Many adventures, and some hardships, were endured together, but they do not seem hard in retrospect. Our last field expedition together was through Lower California in 1905-6, a part of the results, of which were embodied in Nelson's 'Lower California and its Natural Resources,' published in 1921 as a memoir of the National Academy of Sciences.

With the passing of years Nelson's major activities gradually turned

from scientific research in field and laboratory to administrative duties. He was placed in charge of the Division of Biological Investigations, was promoted to Assistant Chief, and then to Chief of the Bureau of Biological Survey, from 1916 to 1927 when he retired from administrative duties and two years later at the age of 74 he retired from active work with the Bureau.

While so well known as an explorer and in the field of wild-life research, perhaps Nelson's greatest service was in promoting the administration of wild-life. As Chief of the Biological Survey he initiated and fostered the development of new lines of activity and many measures bearing upon the conservation and general administration of wild-life from a national standpoint. With his background of knowledge of the past he became much impressed with the evidence of the disastrous effect of drainage activities on wild-life, especially on the Ducks and Geese of North America, and urged restoration measures.

He was actively instrumental in the negotiation of the Migratory Bird Treaty with Great Britain, to protect the birds, especially the water-fowl extensively shot as game, that migrate to and from Canada. This treaty constitutes a landmark in the history of wild-fowl conservation in North America, one that will long be remembered. Believing in the traditional American system of hunting for sport, regardless of social position, he was an ardent advocate of the Public-Shooting-Grounds-Game-Refuge Bill, including a one dollar license tax feature, which was before the Congress for years, passing the Senate at one session, and the House at another; but bitter opposition developed and it could not be brought to a vote in both chambers during the same session. Another bill, the Migratory Bird Conservation Act, passed shortly before he retired, authorized direct appropriations by the Congress to provide for the establishment of refuges, but only relatively small amounts have thus far been made available under its terms. That the original bill was meritorious in principle is shown by the passage just before his death of the Migratory Bird Hunting Stamp Act, which is essentially an outgrowth of that discredited measure. Nelson was also instrumental in securing the enactment of the Alaska Game Law of 1925, in establishing the Bureau's work for the improvement of the reindeer herds in Alaska, and in fostering bird banding as a method of ornithological research. Under his administration of the Biological Survey, and policy of coördinating the efforts of individuals and all other organizations, signal advances were made in wild-life conservation in America.

The consummation of important conservation measures is usually the result of teamwork on the part of a group of interested leaders. Nelson seemed to be content to coördinate and direct operations from a position somewhat in the background, leaving publicity and the more conspicuous rôles largely to others. For this reason the active part he took in the con-

servation movement is apt to be overlooked and submerged in the cross currents of clamor for credit, reflecting the rather sordid human trait commonly displayed both by individuals and organizations, and one he decried. This should not, however, be construed to mean that he stood alone in this category, or that there was any lack of prominent leaders who were praise-worthy in their attitude. Notable among others who were also retiring in disposition, but active in the promotion of wild-life conservation measures was his friend Charles Sheldon. He and Nelson shared many interests in common, and their intimate friendship approached brotherly affection.

Nelson's published works include more than 200 titles, covering a wide variety of subjects, mainly scientific in character. In recognition of his scientific work, both in the field and the laboratory, many species of various kinds of animals and plants have been named in his honor. These include 1 genus and 19 species and subspecies of mammals, 18 species and subspecies of birds, 2 species of reptiles, 1 amphibian, 5 species of fishes, 4 species of land shells, and 1 butterfly; also, 1 genus and 55 species and subspecies of plants. In recognition of his geographic work, Nelson Island and Nelson Lagoon, on the coast of Bering Sea, and Nelson Range, a short mountain range in southern California, have been named in his honor. In recognition of his accomplishment in the field of science, Yale University conferred upon him the honorary degree of Master of Arts, and George Washington University that of Doctor of Science, both in 1920. He was a member of numerous scientific and conservation organizations.

Nelson never married, although he expressed admiration for many women, some of whom were numbered among his valued friends. He regarded his uncertain health as a bar to successful matrimony. His nearest surviving relatives are two nephews, Harry Buchanan Nelson and Robert Leiland Nelson, of Oakland, California. He was able to continue his literary work until very near the end, which came suddenly, but without great suffering, on May 19, 1934, in Garfield Hospital, in Washington.

Biological Survey,

U. S. Dept. Agriculture, Washington, D. C.

EVENING DRILL OF CHIMNEY SWIFTS DURING
THE LATE SUMMER.

A. L. PICKENS.

Boy and man, to use a quaint old expression, I had had a friendly interest in Chimney Swifts (*Chætura pelagica*) for years before I had opportunity to observe one of their retiring drills. In August, 1922, a group gathered at one of the tall old chimneys in a house near the Governor's mansion in Columbia, S. C. My work carried me out of the city the next day, and I was gone for several days. Ten years later, almost to the day, I found another such band wheeling about the chimney of Christ Episcopal church in this city. For several days I had excellent opportunity to study their movements. The advance of twilight brought out the gathering "chippers," though one evening they began more than half an hour before sun-down.

Swifts collect by hundreds in a formless mass, then perhaps they dart away for a number of blocks, form a long line like a letter "I" and advance on the chimney that is to be their host. Coming near the leaders veer to the right or left and draw the line into a "J," at times perhaps reversed. The tail curls into a circle, and the whole band presents the appearance of a script figure of "6," also perhaps reversed, the tail being wound rapidly on the revolving loop to form an "O." This ring may grow wider or contract, and often a few birds lead off to the outside and are followed by a trail that for an instant gives the whole group the appearance of a small Greek delta, " δ ," then if all follow, in another instant we have an "S"; then quickly the upper loop closes into a new circle on which the lower part of the "S" is rapidly wound, and soon a counter-clock revolving ring has given place to one turning clockwise. But all the individuals may not follow. Sometimes enough remain in the old circle to keep it going, the neck of our small "delta" turns upon itself and strikes back upon the first ring and quickly we have a figure of "8" the two loops revolving in opposite directions, one on the other like cog-wheels! The law that drives vortices in a particular direction on a particular side of the equator cannot tyrranize over the Swifts. Once only a crowded "10" (with the "1" apparently crushed against the "0") was seen; better say a small alpha, " α ," or a mathematical node. The birds seemed to sweep in at the upper tab, swing round the loop and emerge at the lower tab. This gave place to a sort of double ring or figure of "8" with segments dropped from each loop in such a way as to produce a fleeting figure of "3," but so rapidly was all this done that the eye could not record with accuracy the processes involved. The absence of the involved figures is noticeable during the last days of their performance, but this may be no more than coincidence.

This unconscious sky-writing, or perhaps merely sky-lettering, was concluded one evening in ten minutes, on another it ran to nearly fifty. A new band coming up one evening seemed about to plunge into the on-coming side of the ring. Some collisions must have resulted had they not quickly adjusted themselves to the flow of the current the group being wound gracefully into the revolving reel. Once only, circling gave rise to two nearly parallel lines travelling in opposite directions. Again a spindle-shaped mass curved at each end to form a crescent; some birds sped across from one tip to the other forming a clumsy one-sided "O" like an old bow-basket and its handle, but the mass quickly followed the lead to form the revolving circle.

However the drill progress, long or short, it terminates in the unwinding of the final circle into the mouth of the chimney. Sometimes small groups of the birds passing above the chimney drop toward its mouth in a gesture of seeming salute but the urge of the ring above seems to draw them back. It is dip, dodge and pass on. At last, however, with increasing darkness, some drop from the ring and settle within the chimney and a living line follows like a thread from a rapidly revolving spool or reel. The unwinding may come either from the inner or from the outer side of the circle. As many as 300 may drop in per minute and the circle quickly unwinds. Small bands arriving late may drop in without any more formality than momentarily fluttering above the chimney.

Probably members of the same flock seen at Christ Church in August, 1932, used the same chimney May 4, 1933, with some attendant aerial evolutions.

The records given here are from notes made on the spot during the August drills. The term "S-ing" is of course coined from the process already described. The figures at the left refer to the number of minutes elapsing after the drill got under way. In the case of duplication of a figure the latter indicates the same minute plus additional seconds not accurately determined.

August 25—At 6:55 a gathering action was apparent among the birds. In five minutes, at seven o'clock, notes on the evolutions of the group were possible.

1. Mass; disperse; fly away; return.
2. Ring forms.
3. Breaks up.
4. Ring reforms.
5. Break; fly off.
6. Back over chimney.
7. Fly away again.
8. Return.
9. "I, J, reverse 6, to O."
10. Great ring.
11. Becomes an "8."
12. One ring again.
13. Break up.
14. Fly away.

| | |
|---|--|
| 23. Back; great ring. | 30. "I, J, reverse 6, to O." |
| 24. Rearranging. | 31. Begin dropping in. |
| 24. Great ring. | 33. Loud chippers cease. |
| 25. Concentrating. | 33. Nearly all in; ring almost gone. |
| 25. Massed. | 35. Seven still out. |
| 26. "Crowded 10." | 37. Two still out. |
| 28. "Figure of 3 into an 8." | 37. One chippers. |
| 28. Re-ring over chimney; some dip and dodge. | 41. One drops in; other disappears. |
| 29. Reverse movement. | 53. Too dark to distinguish the birds from the bats; others may be in. |
| 29. Ring breaks up. | |

August 26—Some western clouds were visible. At 6:44 an assembling had begun. Nothing noteworthy in action until the first minute after 7:00.

| | |
|--|---|
| 1. Circling. | 13. Sweeping about. |
| 1. Into parallel lines. | 14. "Mass; crescent; bow-basket, to O." |
| 3. Broader circle. | 14. Counter-clock; S-ing apart. |
| 4. Counter-clock S-ing into clockwise O. | 15. Gesture to chimney. |
| 5. Circling. | 16. "Figure of 8." |
| 6. Counter S-ing to Clock. | 17. Circle; new band joins. |
| 7. Disruption. | 18. S-ing into counter-clock. |
| 7. Dispersal. | 20. Reverse; then "8." |
| 8. Return. | 21. Still an "8." |
| 9. Sweeping about. | 22. Begin dropping in. |
| 10. Circle; reverse. | 22. Circle broken up; chippers cease. |
| 11. Sweeping; circling. | 28. Last seen to drop into chimney. |
| 12. Counter-clock. | |

August 27—A few were about the place at 6:43. Drill began about 7:10.

| | |
|----------------------------|-----------------------------|
| 1. Circling counter-clock. | 8. S-ing to counter-clock. |
| 1. S-ing into clock-wise. | 9. Clock-wise. |
| 2. Break up. | 10. Many drop in. |
| 3. Counter clock. | 10. S-ing to counter-clock. |
| 4. Break up. | 12. Dropping in again. |
| 4. Counter clock. | 14. Chippers cease. |
| 5. "Figure of 8." | 16. 3 fly away. |
| 5. Break up. | 18. One seen outside. |
| 6. Clock-wise. | 20. One drops in. |
| 7. First dips at chimney. | |

August 29—A trip out of the city caused me to miss observations on the 28th. About 6:45 the first chipper was heard; by 7:00 gathering chippers were heard. The circle drill began about nine minutes later.

- 1. Clock-wise circle.
- 2. Counter-clock.
- 3. Clock-wise.
- 4. Gesture to chimney.
- 5. Counter-clock.
- 5. Dropping into chimney.
- 6. Dropping in suspended.
- 7. Clock-wise; dropping in resumed.
- 8. General chippers cease; belated band arrives and drops in without going through any true circular drills.
- 10. Last two left on the outside drop in.

By way of experiment, this time I went to the chimney and struck a large piece of tin that closed an opening at the base. Perhaps a hundred out of eight hundred or a thousand in the chimney fluttered out and flew off, but most or all later returned and entered the chimney again. One might have conjectured an increasing efficiency in the bed-time drill from following the actions of the last few evenings.

August 30—First chipper was heard overhead at 5:30; another at 5:47; as the clock was striking six a number swept in from the west flying low. A minute and a half later a few essayed one or two circles. At 6:23 they were thick. Several dipped toward the chimney amid chippers. Real drill soon began.

- 1. Gathering thick.
- 3. Counter-clock.
- 3. Reorganizing.
- 3. Clock-wise.
- 4. Counter-clock.
- 4. Break up.
- 5. Almost counter-clock.
- 6. Clock-wise.
- 7. Break up.
- 8. Counter-clock.
- 9. Clock-wise.
- 9. Counter-clock.
- 10. Break up.
- 11. Clock-wise.
- 12. Broader circle; and counter-clock; begin dropping in.
- 14. Dropping in suspended.
- 14. Dropping in resumed.
- 17. Circle disrupted.
- 29. Much chippering; new band arrives; circle reformed; another band arrives; counter-clock.
- 31. Scatter; counter-clock.
- 32. S-ing to clock-wise.
- 33. Counter-clock.
- 34. Break up, from new bands pouring in as it appears, these tend to disrupt drill.
- 38. Clumsy circling, and apparently disordered dropping in.
- 49. 2 out; new group arrives.

Whether the seeming disruption of the seeming increase of efficiency came as a result of new and untrained recruits from further north coming in would not be wise to conjecture. Nor can any reason for the earlier time period on this afternoon be given. Observations were interfered with after this by the birds shifting their location. Either this flock or another

showed up at the chimney of a church in another block. Persecutive measures on the part of a church, that could not appreciate with the psalmist the cradle the Swallow found for her young at God's altar, interfered with scientific observation. Smoke, fire, sling-shot, persecutive small boy, and neurotic adult gave scant welcome to these useful insect-destroyers.

Effort to observe the morning departure of the birds was highly unsatisfactory. August 27, I rose early, and at 5:30 with the bats still about, was in the cemetery back of the church waiting. One bird after another awoke and gave its distinctive call. The sun came, rose to an hour high, still no birds. At ten minutes to seven, in response to a noise below, they came boiling out, dropping like emerging bats do over the edge of their dormitory. In three minutes all were out; in another two minutes the sky showed not a Swift, all had flown west, probably making for a large meadow on the nearby river. August 28, I arrived before the emerging time of the previous day, and waited until after nine o'clock to find the chimney empty, they had gone ere I arrived. August 30, while I waited at about 7:12 a.m. a laborer began whetting a scythe near the chimney and the sooty host seemed to explode into the air. September 1, I reached the churchyard some time before darkness lifted. The low mutter of wings inside the chimney seemed to indicate an approach toward the mouth. At 5:52 there was a chipper overhead and finally in the dim light cast by the obscured sun I made out the forms of a few Swifts. At two minutes of six I was testing the depth of a hole in one of the buttresses of the church with a straw, when the Swifts started from the chimney and kept coming for about seven minutes, some seven to eight hundred in number. By the lapse of an additional seven minutes the sky was virtually clear of Swifts. Their irregular rising is quite as intriguing a habit as their evening drill. To say the least, I have lost some of the superior feeling I once entertained for the old protonaturalist who, intrigued by such mysterious birds, theorized that they spent the winter on the bottom of the sea!

208 E. Washington Rd.,
Greenville, S. C.

TEN AUDUBON LETTERS.

BY ALBERT E. LOWNES.

No excuse is needed for printing the letters of John James Audubon. He was a voluminous correspondent and he reveals himself so fully through his letters that they constitute a major source of information about his life and experiences. The ten letters that follow are all of the ornithologist's most active period,—from his first arrival in London in 1827 to his last expedition after quadrupeds in 1843. The period has been so thoroughly covered by Audubon's biographers that it seems that little more could be said, but each of these letters throws further light on the man and his methods.

The original letters are all in the writer's possession. They are reprinted literally, using Audubon's spelling and punctuation, except that superior letters are indicated by italics. Only such notes are added as serve to identify persons mentioned in the letters or conditions attending their composition.

I.

Mr Audubon presents his Respects to Mr Phillips Esqr¹ and begs to know at what time it will be most agreeable to meet him—he is at 55 Great Russel Street Bloomsbury May 28th 1827—

II.

Edinburgh Novr 29th 1830

My dear Harlan²—

I have this instant finished a long letter to McMurtrie³ respecting the securing of the copyright of my first volume of letter press in our United States which he will show you I dare venture to say.—Mean time I give you the following questions—

First can a copyright be secured without *publishing* the work but merely by depositing the manuscript in a Public Institution or such a library as that of Congress for instance?

2d, can an American bookseller publish from an edition of the same book published in Europe in spite of the copyright secured in America?

I am up to the eyes at writing the first volume of my Land Birds which will consist of 450 to 500 pages of print octavo size.—I am trying my best to render the work equally *highly* scientific as popular.—A good portion is now ready for the press here, and my good wife is copying the manuscript to forward to America to Mr Edd

¹ Benjamin Phillips, M.D., F.R.S.L. This letter was written just one week after Audubon arrived in London for the first time, fresh from his triumphs in the provinces. It did not lead to an immediate meeting, but some time later Phillips subscribed to the 'Birds' and Havell introduced him to Audubon. The two became the firmest of friends. Audubon took a house but a few doors from Phillips's on Wimpole Street and one of Victor Audubon's sons was named Benjamin Phillips Audubon.

² Richard Harlan (1796–1843) was Audubon's dearest friend in Philadelphia and a distinguished physician and naturalist.

³ James McMurtrie, member of the Academy of Natural Sciences of Philadelphia. Audubon had great faith in his judgment and McMurtrie had full charge of seeing the American edition of the first volume of the 'Ornithological Biography' through the press.

Everett¹ one full month before the book is before the European Public.—Collect all the information you can with McMurtrie on this head and let me hear from you as soon as you can.—

I have now entered into the *science* of ornithology with all my heart and I am determined to cary the knowledge I possess of our birds so far as to close in a degree the business of writing about them and of their being represented again shortly.—I have it in contemplation to publish a general Sinopsis of the whole discovered species in the highest, most minute & concise descriptive manner, especially as regards the bills, tongue, eyes, & muscles of the head, with the leg & feet—with a view to make *that work a standard* of ornithology for all students of that science *particularly* or expressly for those of the U. S.—Now I need assistance and I apply to you full of confidence.—

Have collected at my expense and for my account *the heads and legs with feet* in pairs both, meaning *males & females* of every species you can, the heads cut off with a good portion of the neck and the leggs sufficiently above the *knee joint* as to answer my purpose exactly.—Have them tied I mean the head & the leggs of each bird together and with those parts of a male bird attach the same parts of the female of the same species. Whenever you can have male & female procured at the same time, all fastened together by a good thread with a small piece of *wood* numbered by notches or *Roman Figures* to corespond with a correct list kept by yourself for the purpose, after which put each of such parcels of heads & feet into a *Barrel of Whiskey* which you will buy for me.—Put Wilson's names to your list as far as his work goes and Bonaparte's Synopsis for the rest.—The boys who go out shooting can bring you a great variety of the birds, and the market may also furnish a great variety.—Use your own discretion for the prices you may have to pay, for although I am determined not to suffer my undertaking to suffer through want of money to carry it forward, money is a *good article* in my pockets.—

Collect for me *all and everything* you can between the time you begin after this reaches you until I see you next autumn (which God willing will be the case) and I will settle with you in a *Friendly Manner*.—If you prefer cash for cash say so, and I will see that you are supplied in time either by Messrs. Walker or my Brother's wife at Louisville.—

I am writing to Wm Bakewell my Brother in Law at Louisville to make my sons collect & put up all they can of birds heads & feet in the same manner and also to Louisiana—I wish I knew to whom I might write at Boston—I would willingly give a full copy of my Work for a compleat series, thus preserved and collected for me.—I can draw the descriptions of sizes & feathering from my own drawings & names and habits(?) in my Journals—As I intend spending 18 months in our Dear Woods and go further in them than I have yet done I have some hope of securing an entire collection of the sort mentioned through my Friends & myself to bring over to Europe on my return—

My 20th number is finished & out, therefore my first volume of 100 plates is compleated—The volume of letter press is in reference to that volume. There will be anecdotes, descriptions of different parts of the Country, some Incidents of my Life in the Woods & in the *World &c* and as to *scientific* portions I will not fear on that score I assure you. When *Congress* receives the 20th No you will see at your house in a few days afterward the noble *Falco Harlanii*²—

¹ Edward Everett (1794–1865), statesman. Almost single-handed, he persuaded Congress to subscribe for the 'Birds.'

² For an account of this bird, see Professor Herrick's 'Audubon, the Naturalist,' vol. I, page 427.

I am it appears a member of the Society of Arts & Sciences of Boston Oh Philadelphia, Philadelphia, is it true that I am not worthy of being one of thy Academicians?¹

Now my dear Friend I must once more bid you Adieu, remember me to Sully² & other of our Friends & believe me ever Yours most

Sincerely

JOHN J. AUDUBON

I have taken leave to mention your name, McMurtrie's, Sully, Le Sueur,³ & Wetheril⁴ in my Introduction—

I quote no authors and only such synomims as are absoly necessary—

I have written for the press (in my book) a description of the Pine Swamp⁵ that will please good Jediah Irish and will bring a stare to the Eyes of the *Youngsters* of your fair City—Try to see Lehman⁶ and ask him to write to me and keep to yourself, *Murtrie & Lehman* my return next autumn to America—

Richd Harlan, Esqr M.D. &c &c &c

Philadelphia U. S. of America

III.

Charleston S. C. February 12th 1837

My dear Mr Havell.⁷—

We are now on the eve of taking our departure from this place, with the view to proceed on what I look as my last Ornithological Tour.—May have been Joined by our friend Edd Harris,⁸ and having no Revenue Cutter in this port at present, we will *Three of us*, proceed by Land to Pensacola, Mobile, &c in Two or Three days, and hope to meet with one of the Cutters very soon.—

I was very glad indeed to hear through my Son Victor, that you have at last secured yourself respecting Old Phillip's⁹ debt to you; and now hope that you may not ever meet with such another *adventure*!

Since here I have drawn 76 birds, a Hare, and a Toad—I shipped 9 Drawings on the 17th of Decr to the care of the Rathbones¹⁰ of Liverpool by the American Ship The Mohawk, Capn Stephens, and these Drawings I sincerely hope have reached London ere this day in good order.—On the 6th Instant Nine others, consigned to the Same House at Liverpool, went off in the American Ship The *Superb* Capn

¹ At this time, Audubon was not a member of the Philadelphia Academy. He had been introduced there by Bonaparte and had the backing of many influential members, but the opposition of a few persons (some of whom were financially interested in Wilson's *Ornithology*) was strong enough to keep him out for many years. This irritated Audubon greatly. My copy of Vol. v, part i, of the 'Journal' of the Academy bears Audubon's signature on the title-page. Below his name he has added a heavily underscored *F. R. S.*

² Thomas Sully (1783–1872), celebrated painter in Philadelphia. He gave Audubon instruction in the use of oil colors.

³ Charles Le Sueur (1780–1846), naturalist and artist. Friend of Audubon in Philadelphia.

⁴ John P. Wetherill (died 1853). Active member of the Philadelphia Academy and friend of Audubon.

⁵ See 'Ornithological Biography,' vol. i, page 52.

⁶ George Lehman, Swiss landscape painter. Assistant to Audubon on the expedition to Florida, 1831.

⁷ Engraver of the plates of the 'Birds.' After 1839 he lived in the United States. (See the letter of May 11, 1839.)

⁸ Edward Harris (1799–1863), of Moorestown, N. J. Audubon's first patron and lifelong friend. He accompanied Audubon to Florida (1831) and up the Missouri River (1843).

⁹ Not identified. Not Benjamin Phillips, see note 1.

¹⁰ Audubon's friends and patrons. Mrs. William Rathbone was the first subscriber to the 'Birds.'

Irish, and I trust that these also will reach in goodly times, so as not to interrupt or stop the progress of our Publication.—

You will observe that in consequence of Many New Birds coming unexpectedly to hand, I am obliged to have some plates more crowded than was the general case before, which is unavoidable in consequence of my determination to finish the Work with no more than Four Hundred Plates, eggs included!—I need not say to you after our many years of acquaintance and good understanding that I hope you will exert yourself, and make those about you exert themselves also to proceed on and to finish this great undertaking to the best of your capabilities.—NO, I take it for granted that you will do so, and leave the Subject for the present.

I should have liked very much indeed to have received one Sett of the Numbers you have finished since my departure from London, and wish that you would, when this reaches you forward such a set to New York, where I could see them as soon as I return from my forthcoming expedition. I always feel great delight whilst viewing the progress of the Work, but I believe now, more than ever, as it draws towards its completion!—I received a few days ago one of the setts of 3 volumes out of the 5 sent to New York and like it well.—When (as I expect it will be the case) we have 50 Compleat Copies to print, colour and have bound It will appear as a Frolic after all our Labours, and I intend taking with me a famous list of Subscribers, with whose money we will keep the Machine in good condition.

Mr Harris came here on the 6th Instant, and on the 8th we went Deer-Hunting and killed (among the party of 5) Five Deers! I wish I could have handed you the whole carcass of the Largest, and disposed of the rest among our Friends and family in London.—

We are in perfect health, will keep together all the time of our absence, and I hope will return to England about August next.—

I have four beautiful Flying Squirrels for you, provided they live until our arrival at London.—Indeed, I intend carrying a rare mess of all sorts of Curiosities, to prove that, at least, We think of our absent Friends.—Show this to my Dear Wife & Son.¹—Present my best regards & good wishes to your own Dear Wife and child, to Dolphus,² Mr Blake³ and Brother Henry⁴ and believe me as ever

Your sincere friend,

JOHN J. AUDUBON

To Robert Havell Esqr.

London

IV.

Sir—

I have the honour to acknowledge the receipt of your letter of the 3^d Instant, conveying to me the information that the Ornithological Society of London has elected me a Foreign Member.

I beg you to assure the President & Council of the Society of the gratification with

¹ Mrs. Audubon and Victor remained in London to supervise the production of the 'Birds' while Audubon was in America searching for new species.

² One of Havell's assistants.

³ Engraver, employed by Havell. He was so proficient that Audubon looked on him as Havell's successor in case anything should cause Havell to give up the work before it was completed.

⁴ Henry Augustus Havell (1803–1840), artist. In 1829 he opened a print shop in New York, which failed. He returned in 1839 and was again unsuccessful. Audubon gave him financial assistance and offered him work on the 8vo 'Birds.' Havell refused to work with Bowen, the lithographer, and laid plans, which were never consummated, for a pirated edition.

[Auk
April]

which I accept the honour and of my due appreciation of this mark of their consideration.

I am Sir with great regards

Your most obt Servant

JOHN J. AUDUBON

To

Wm Holl Esqr

&c &c &c

Secretary of the Ornithological
Society of London

4 Wimpole Street
16th Novr 1837

V.

Edinburgh May 11th 1839.—

My dear Mr Havell.—

I am quite surprised at my not receiving an answer to my last to you, sent on the 4th Instant.¹ Surely my letters to London cannot have so sadly been miscarried?

In my last I asked of you to call on Mr Hayward² (to whom I had written 10 days before, but who did not receive my letter) and to tell him to engross the Insurance for the Samson from £3,000 to £5,000 as soon as possible. I also asked of you to take on board the *Westminster* (the Packet by which you will [leave] England on the 7th of next month) all such Books, Drawings or other effects that may be deposited under the care of our good friend Benj. Phillips, including my Original Drawings which must be packed and Tined securely. To have all these regularly shipped with Bill of Lading &c and addressed to my Son Victor G. Audubon, care of N. Berthoud,³ New York. Mr Hayward may do all this, and save you the time and trouble connected with such matters.—I besides the above asked you to tell Mr Hayward that I wished him to forward his a/c to me, that I might sent him a check for what I owe him.—And again I asked you whether or not, it would suit you equally well to be paid in America for the Extra sets of the Birds of America; as to pay you in America would be much more desirable to us, as when I leave this country I am not anxious to return to it again, or to be troubled with London Bankers any more.—

We received a letter from Victor last evening, in which he mentions having written to you and to Mr Phillips by the same Packet (the Virginian). He was then at Charleston at Doctr Bachman⁴ who the day previous had killed 4 Deer 1 Wild Turkey and 1 Fox! No such shooting in the Regents Park me thinks!

My Son John, his Wife, Babe⁵ & Nurse will be in London on Saturday or Tuesday next when they will see you. They are going to Paris and shortly to America, perhaps indeed by the Westminster, in which case you can have some talk among old and well known Friends!

¹ The letter of May 4, referred to, is printed in the 'Letters of John James Audubon.' Boston, 1930.

² Custom-house broker of London.

³ Nicholas Berthoud (married Eliza Bakewell), Audubon's brother-in-law.

⁴ John Bachman (1790–1874), Lutheran clergyman and amateur naturalist. Audubon's two sons married his two oldest daughters and he wrote most of the text for the 'Quadrupeds.'

⁵ Lucy Audubon (1838–1909), daughter of John Woodhouse Audubon and J. J. Audubon's oldest grandchild.

I pray you to answer this by return mail and with best wishes from all to all,
believe me always

Your friend

JOHN J. AUDUBON
6. Alva Street

To

Robert Havell Esqr
10 York Buildings
New Road
London

VI.

86 White Street New York
June 30th 1840

Dear Sir

Your favour of yesterday, was delivered here a few hours ago; and I answer to its contents at once.—

I have according with your request delivered Two Copies of the Birds of America each from No 1/12 (No 12 having been issued since you were here) and one No 12 to make the Sett you took compleat. We will continue to deliver the Nos as they come out to D. Appleton & Co—

I wish you had forwarded us *the names* of the subscribers you have now, that we might have them entered on our printed List, and recommend you to do so for the future.

Although it is my intention to visit Albany soon after the celebration of our Independence, it would be well for *you* to exert *yourself* and procure as many names as may be in your power to do, and, to assist you in this particular, I send you a few printed Prospectuses which you can place or hang in your Shop, and upon which those Persons willing to subscribe, can put their names and address.—

I remain Dear Sir

Very Respect'ly

Your obt Servt

JOHN J. AUDUBON

W. C. Little¹ Esqr
Albany N. Y.

VII.

Providence, R. I. Sunday Aug 9th 1840.

My dearest Friends—

I wrote to you this day 2 weeks from Nantucket, and gave you a partial a/c of that curious island, where after all, I procure 18 new Subscribers.—I hope my letter did reach you, as I thought it would engage a few moments of Dearest Maria's² attention, and perhaps please her.—Now to please you both and all the Dear Friends beneath whose roof you stil are, I will give you some account of what I have done since then.

I was very sick on my passage back to New Bedford, but the kind looks of my numerous Friends there, a good Dinner, and a good night's Sleep restored me quite and enabled me at once to resume my labours. The next morning I received 13 pictures from New York, all copies from my original Drawings, and in two days I

¹ Audubon's agent in Albany and a subscriber to the 8vo 'Birds.'

² Maria Bachman Audubon (1817-1840), eldest daughter of John Bachman. She married John Woodhouse Audubon in 1837. She was ailing at the time this letter was written and died very soon afterward.

sold the following ones at the prices annexed, to wit.—Bird of Washington \$100. Turtle doves 75\$. Red-shouldered hawk 50\$,—these to Mr Howland,¹ a wealthy Quaker. White-headed Eagle \$100. Tetra umbellus \$75. These 2 last bought by a Mr Morgan.²—Peregrine Falcons \$75.—Purple Grakles \$40, to Mr Sam'l Morgan.³—All these were paid cash down, and I have yet 6 others there for sale. Besides this I had the fortune to sell 2 copies of the large Work in sheets to a Mr Seabury,⁴ each copy for 875\$ and 22 portraits for as many Dollars. He paid me all except a balance of 397\$ which I will receive next week. He purchased these copies for the purpose of selling the plates singly on spec and I hope he will do well with them, and as all my subscribers at Nantucket paid me and several of them for the 1st year, I was enabled to send Docr Parkman⁵ \$1099.70/100—and Victor \$1005!—This has enabled Victor to pay Havell \$1000.—and to keep the pot boiling!—Considering the tough times, and I like this better than the "Hard Times" or the word "Crisis," has been doing pretty well for an old man like me.

Here I am arrived to try my luck tomorrow, and as I was born under a fortunate star I expect to do something worthy the time spent.

I called several times on young Lee⁶ at New Bedford and gave his Young Wife a Lesson in oil painting! She is the smallest woman I ever have seen married. Her waist is about the size of a quart bottle; but she is very clever and amiable and lively. She sang for me far sweeter than a Nightingale.—I have received 2 Gull's Eggs from friend Doc'r Wilson⁷ and had these been laid on a sand beach, the bird in a wild state; I would have pronounced these gulls new to me, but little dependence can be placed in eggs thus produced. My best regards to him. Where is his son now that you have a new Collector of the Customs??—

My poor head so very frequently travels so much faster than my body or my fingers and pen that I was about forgetting to say to you that I went from New Bedford home and returned again in less than 48 hours and spent several of these at home where I had the pleasure of finding all pretty well save our beloved Eliza⁸ who complained somewhat of her cough. Little Harriet⁹ who almost walks by herself remembered me at once & I was delighted to kiss her and dearest old Mother.—The little angel has 4 pegs; just the number I have! Hers are new and as sharp as the edge of a new razor; mine are blunted and worn out by age, fatigue, and almost constant anxiety. How dearly I should have liked to have spent *this Sunday* with you all. How oft I would have kissed my little Lulu¹⁰ and perhaps pleased our beloved Maria; and talked and talked with the rest of the family, old Mrs. Davis,¹¹ &c &c

¹ George Howland, Jr.

² Charles W. Morgan, an important merchant and ship-owner of New Bedford.

³ Should be Samuel Rodman, who also subscribed to the Svo 'Birds.'

⁴ Joseph Seabury. It is interesting to learn that Audubon had no compunction about breaking up sets to sell the individual prints.

⁵ George Parkman, professor in Harvard Medical School, and Audubon's friend and agent in Boston.

⁶ Probably Stephen S. Lee, who was a subscriber to the Svo 'Birds,' but possibly Hepburn Lee.

⁷ Samuel Wilson, M.D., of Charlestown, S. C. He was a subscriber to the Svo 'Birds' and assisted Audubon by collecting birds and eggs in his region.

⁸ Eliza Bachman Audubon, second daughter of John Bachman and wife of Victor Gifford Audubon. She died in 1841.

⁹ Harriet Bachman Audubon (1839—), daughter of J. W. Audubon.

¹⁰ Lucy Audubon. See note 24.

¹¹ Mrs. Davis. An old friend of Audubon's in Charleston. More often he refers to her as "Grandma Davis."

When I leave this I will return to New Bedford for one day, proceed to Plymouth, Boston, &c as far east as Portsmouth, New Hampshire, as at the latter place I have some hopes of selling a copy of the large Work.—Afterwards I will wend my way back towards home once more, rest a few days and retake the field of action until the 25th day of Decr after which I will give up hunting subscribers and seek Rats and other animals of the sort. By the way, my collection is coming on apace and I have several friends at work for me in different parts of the Country.—

When this reaches you, you will have had the 14th No which finishes the 1st Vol. of the little Edition. I am anxious to see how it looks bound.

As there is no post this holy day I will not close this until tomorrow when perhaps I may have something more to say. Meantime God bless you all & may you, my beloved children, soon be enabled to return to us along with some of the members of the family.

Monday. 10th My Dear Son. I have procured only one subscriber this morning and now must close my letter with nothing more worth while. God bless you.

Your Friend & Father,

JOHN J. AUDUBON

To John Woodhouse Audubon, Esqr
Care of Revd John Bachman, D.D.
Charleston, South Carolina

VIII.

New York Jany. 25th (Sunday) 1841.—

My dear Children and Friend.—

Your precious letter of the 3d Inst. we received a few days ago, and were indeed right glad to see that our beloved Eliza's hand writ was affixed with a few lines, showing as we all hope her better state of health, as these very few lines have been the only ones received from her since your arrival at the Havanna.¹—

It is quite clear that up to that date you had not received a fine letter of my own, although as well as John Bachman says we have written enough to give you full employment in the reading line.—I am sorry, very sorry indeed for all this, because in my earliest letters I asked you to write to us by every oppy. *to any part of the States*, and had you done so we must have had many more letters from you than we can receive by a different course.—Now we have only the oppies. arising from vessels directly bound from this to the Havanna, and these I am sorry to say are few and far between.—I must here tell Victor that it will not do for him to put off writing his letters to us until the vessel by which he writes is *underway!*—We all exceedingly regret that you should have remained in the *Infernall City* so long instead of putting at once for the Interior of an Island so far famed for all that is most congenial to ardent spirits.—You say however that you are going in a few days to some place about 17 miles from Matanzas. Why not have gone to the very interior of the island in one of the most elevated and by the promise of a dry atmosphere still better suited to the state of health of our Eliza?—I would have done so at once for I feel assured that the beauties of nature in these high altitudes would have been preferable to all you in every point of view.—

Here we all go on much as usual. Johny has 4 full length (small) pictures to paint and has one of them partially finished which I think is highly creditable to him. The

¹ Victor and his wife, Eliza, were in Cuba in the hope of bettering Mrs. Audubon's health. She died, however, in April, soon after returning to New York. See note 8, p. 160.

names of the parties are the family of Mr Trudeau¹ and he will get \$400 for them. He has begun a picture of his "old dad" that promises wonders and if well finished will be lithographed forthwith. I am sorry that you have not met with ready sales for the pictures but heartily glad that you have no subscribers to the little work and wish you to avoid everything of the sort in *the Island of Cuba!*

About a week ago Mr Bowen² got on his high horse and went so far as to write to me that he would give up the work! Telling us big stories about his losses &c &c and complained bitterly that every number of Johny's drawings contained more work than the last. Chevalier³ I do believe felt me easy on the subject. I never did and in consequence of all this I wrote a letter to Bowen with the will and wishes of Mamma and Johny in which I told him that we were ready to accept his resignation and asking him to appoint a day for settlement and *actual payment* of the balance! Bowen was at breakfast with us the very next morning but one. We received him as usual extremely kindly; he showed us the coloured proofs he had brought along and I refused them at once, determined as I was that we were to have our own way over him for once and for ever. He stared not a little, but on his hearing me tell him that in case of should give up his engagement, that I would send Johny to England that very day for the purpose of bringing over 50 workmen as good as himself, he mellowed down as an apple does in an oven, and ere he left us the same day did promise us never to complain again and ask as a particular favour that I would burn his letter, which however I told him I would retain for the "Sake of Old Lang Syne," and I hope we will have no further trouble with him for a *good while*. The fact was simply this, that he had taken upon himself to *cut up our little drawings at such a rate*, that I was determined to check him, and I have done effectively. Chevalier is properly delighted and so are we all.—He has furnished Chevalier with back Nos up to 9 inclusive but it will be something like 2 months before he comes up to No 24. But we must be patient.—

We have made pretty fair collections with the *Members of Congress* and you will not be surprised when I tell you that since my return from Boston, I have actually written and sent off upward of one hundred letters! We are still without an agent at Charleston and God knows when we will have one. Not a word from Mr Grimshaw⁴ or Mr Gordon⁴ has been received, and therefore no money. We will have to pay about 150\$ in cash for the binding of the volumes for New Orleans, and may have to wait 6 months for a return. Do not, I pray you, accept any more such subscriptions. We can have plenty of subscribers near and around us who will receive the work in Nos as published to be delivered and paid for.—We delivered yesterday the last set on hand up to 24 to Capn Britton,⁵ who paid me 24\$.—I have forwarded all the numbers wanted for every part except at Charleston where we scarcely know what subscribers we have, although John Bachman is trying his utmost to bring matters round in that city.—You, my dear Victor, would feel perfectly amazed, were you here, to see the *numerous errors in your entries on our books*. All of which Johny and I have corrected and settled.—This I can easily

¹ Perhaps Dr. James Trudeau, an accompanied ornithologist of New York and a friend of Audubon.

² John T. Bowen, of Philadelphia, lithographer of the 8vo 'Birds,' the 'Quadrupeds,' etc.

³ J. B. Chevalier, a Philadelphia lithographer, and co-publisher with Audubon of the first five volumes of the 8vo 'Birds.'

⁴ James Grimshaw and Alexander Gordon, Audubon's agents in New Orleans. Gordon married Ann Bakewell, Mrs. Audubon's youngest sister.

⁵ Thomas Britton, commanded the *Gladiator* on which Audubon crossed to New York in 1836. He subscribed to the 8vo 'Birds' and was a friend of Audubon's family.

account for by the anxiety you felt for Eliza, but I assure you that it perplexed us not a little.

We have forwarded all Nos to England and written to everybody there. No news from Phillips of late. Not a word from Russia,¹ and I will write to Mr Poinsett² on the subject as I have no faith in the consul here, who has never called upon us. By the way, Mr Poinsett wrote to me to ask me to deliver lectures on ornithology before the "National Institution" in that city, which I very politely declined! Our toll of subscribers exceeds 1100 and we can have as many more as we can wish, *provided* we can supply the demand, and there is the rub! No 25 will be out in 10 days and No 26 not until the first of Feby. on a/c of the labour in finishing the back Nos up to 24, but we will make it all up in the long days of summer.

I finished yesterday morning a *good* drawing of 2 beavers the size of Life, and I am going to paint a picture of them for Bowen to lithograph as one of the series of 6 which he has begun with the Pheasants. The latter is about $\frac{3}{4}$ done and looks finely on the stone. We paid him last week about 1200\$ for work done of the back Nos to No 9.—I greatly regret that you should send W. C. D. Cuthbertson³ *cigars at our own expenses*. He is fast assuming the pompous with us all. (This is entre nous, of course.) We paid Havell 500\$ about 10 days ago and will not settle until you return to us although his balance agrees very nearly with ours. *In his a/c you had forgotten* in some of your entries to carry out 275 sterling for which you had his own receipt. This of course is an *item!* He is now in New Jersey, perhaps with Edd Harris, about to purchase a farm for his only son. Bowen told us that Havell had the best and easiest of times while he was doing our work in London. So much for the humbug of this world!—Of late the editor of the New World has published about 25,000 copies of the wood cut (copper) of the Wild Turkey and a portion of the history of that Bird, and again he has (gratis) published our prospectus daily, in the Evening Signal. There is a *running rumour* in town that the Mercantile Library will at last buy a copy of the large Work. 'Nous verrons?' Docr Bartlett⁴ has been very ill for nearly 2 months, and says that he regrets his not having gone with you. Of course since, the "Albion" has not been quite so good as formerly. I saw him several times within 10 days and I think he will recover, although he has been indeed very low. All well at N. Berthoud's, at the Hall's,⁵ and at everybody that we know, which indeed is preciously little in this city. Will it do you good to know that Ward,⁶ the bird stuffer and thief, died at the almshouse at Boston of actual drunkenness?—

About 10 days ago, I forwarded our a/c against Beile⁷ of Charleston, sworn to, and duly so, before the Judge of the Circuit Court of this city, and put it under

¹ Probably refers to Baron Krudener, Russian Minister to the United States (1827-38) and a subscriber to the folio 'Birds,' but who failed to pay for the work.

² Joel R. Poinsett (1779-1851), of Charleston, S. C., Secretary of War and patron of the sciences. He was the first president of the National Institution of Washington.

³ Probably William Cuthbertson, "originally of London, but now a citizen of New York," 'Ornithological Biography,' vol. v, page xxiv. In London, he and Audubon were close friends.

⁴ Dr. John Sherman Bartlett (1790-1863). In New York he published 'The Albion,' devoted to improving the relationships between Great Britain and the United States. He was an Englishman by birth.

⁵ Probably the family of Caroline Hall, who married John Woodhouse Audubon, 1841.

⁶ Frederick Ward, English taxidermist, brother of Henry Ward, who accompanied Audubon to Florida in 1831. Henry afterward returned to England and both brothers and their mother subsequently troubled Audubon greatly with claims and demands for money.

⁷ J. P. Beile, Audubon's first agent in Charleston.

[Auk
April]

cover to Mr Poinsett to be forwarded by him to John Bachman, who wrote to us that Mr Patrick would settle it at once. Thomas Butler King¹ of Georgia to whom I have written several times never has answered to me. We have had what is called "an open winter" here. Rains in torrents, short lapses of sharp cold, some sun, and again rain. It is now quite mild and raining freely.—I always guessed that your expenses in Cuba would prove very great, and you must try to reduce them by bringing back a great number of good sketches that you can turn to account on your return to us.—We do not know yet if we will remain at 86 White Street this year, but we will know, and we will inform you, as soon as our next quarter is paid, which will be on the 1st day of February, of course.—

Rents are actually "*looking up*" but all the *papers* are up against it. An immense quantity of houses, lots, &c has been sold of late at auction, and yet there is an appearance of better times, which I hope will *reach us, wherever we may be!* Along with this we send you (in a parcel directed to the same care) Nos 20 to 24 inclusive, for you to look at, and for you to bring back to us. I hope that these will reach you wherever you may be when this reaches you.—Along in the same parcel I send you all the papers of the day so you may have some greater insight of what is going on in this part of the broad World.—

I scarcely know anything more for me to say, but as the thoughts may occur, I will leave this to the last moment.—And now a new thought has occurred to me!

It is this. As it may be that you have not received any one of *our* letters to you, I think it proper to give you an idea again of what I did during my journey to Boston and Yankees, by which you will see that I was both fortunate and well-treated. The amount of money which I sent home was something like 1800\$ and I received at Boston alone 105 additional subscribers,—4 at Lowell,—19 at Worcester, 5 at Springfield, and about 12 at Hartford.—I was away precisely one month to a day and I did call that a very fair "turn out!" The "Yankees" as our eastern people are called, are in my opinion as good a set of folks as any in the World, and I love them the more, the more I see of them. My pen which ought to be a "*steel*" one, is, I fear, only "*cast iron*," and I doubt somewhat if you will be able to make out even the run of my ideas? However as we ourselves do receive letters past belief in the hand write of the writers, I hope for the best, and trust to your keen young eyes for the result.—The Hall family are all going to England in April next. We have seen a good deal of them of late, and Johny and I were there 2 evenings ago.—By the way of news let me tell you that old Robert Balham² of Hampstead, England, wrote to me to deliver letters in America! And besides sent a fine young Gent of the name of Burgess with *letters patent* by way of introduction. We like him very much. He is a gentleman throughout, but with all as innocent as Mother Eve was before she plucked the cursed apple from the cursed apple tree! He wishes to become a spinner of *thread* in America, and perhaps he would succeed if he were provided with double leaves, the precious pieces around you, and of which I wish and hope you may send us a barrel full by way of variety, but alas, his double sovereigns, are I am sorry, hardly as valuable as five penny pieces, and yet how many men of the like nature have made their way clean in our country?—Why thousands and more!—

I think that now my thread is pretty nearly at an end, and I hope that dearest Mamma and Johny may have some thoughts that have not occurred to me. I will now close with my blessing, and merely ask by way of a conundrum whether my

¹ Of St. Simon's Island, Georgia. He entertained Audubon at his estate in 1831 and subscribed for the folio 'Birds,' at that time but he did not pay his account until 1842.

² Neither Balham nor Burgess can be identified.

"orange stick" is stil growing or not? Why does not my sweetheart write a very long letter to us? It seems as if you were all on the run to the very moment of departure of a vessel from the Havannah to the United States.

God bless you all.—

Your Friend and Father,

JOHN J. AUDUBON

(*In Mrs. Audubon's handwriting.*)

My beloved children. Your father has written all that can be said I believe almost; but he has forgotten to urge the painting of the pictures you have orders for and which I trust you will not neglect or forget; and the time will soon come for you to leave Havannah and return *home to us*, a period I am always looking forward to. My sister and the young ones were here today. Last night *Master Gordon*¹ had a party of 12. My own dear little ones grow so fast and I am kept altering their clothes constantly. The little queen,² as I call her, gained 2 pounds last month, and their height is in proportion; and I hear that there are two frocks coming from Charleston which will not surprise me if they just fit Harriet. Mrs Hall sent us a nice pork pie and the news of a *daughter born* yesterday, all as well as can be expected.—Madam Trudeau comes every day with her daughter, Mrs. Gaylusac, to sit for her picture which I think will be first rate, and sister today mentioned someone who wanted two. I am very sorry that you are at such a non-come-at-able place. I have wished to send you many things, but the agents say it is almost impossible. Do let me know if so or not. And now, farewell, dear friends, and come home soon.

Believe me your affectionate mother,

L. A.

I cannot close now I think of it without saying that Mr. D. W. C. is the very last man to whom I would give anything. For all our kindness we get nothing but *wine* at the highest price, not fit to drink, and of which we are ashamed!

(*In John Woodhouse Audubon's Hand.*)

For the Trio, as papa says, I write, but after all that Papa has said, I feel that I am ashore before I can make the first tack to windward for an offing. The sails fill, but no steerage way is to be had and I make leeway back to where I started from. I had a letter from Charleston about 4 days since. All well and in good spirits except Mr B. who was labouring under one of his fits of *indigestion*.—I have my hands *too* full now, but I fear it will be a short run, and then a long spell of nothing to paint. But I intend to *shine* at the April exhibition or "go down."—I wish we could have gone to the country and been free from the care, excitement and sorrow of this bustling world,—where we could have learned to say "happy the man whose only care a few paternal acres" etc. but our family is born to separations, and our affectionate dispositions are almost as much sorrow as pleasure to us. Our friends are north and south, east and west, and the new ones we make leave us,—or we them. Not a day but an inquiry for someone, "he's gone out of town, sir, and won't be back." It is the answer I have to make to those who ask for you all.—And when *you* come back, *papa* will be gone to Boston or Albany or Richmond,—an eternal separation of some of us.—But I turn from so dismal a subject and hope for better luck.—Don't send, unless you promised!! cigars to W. D. C. He's a "cow doctor"

¹ Son of Mrs. Alexander Gordon. See note 4, p. 162.

² Lucy Audubon. See note 5, p. 158.

and rides a horse at least 40 hands high, and the horse grows taller every day.—And poor Mrs. C. lives at Staten Island and has a whole cow bought for her at one time, so as to have 750 lbs. of roast, and baked, and salted, and cow heel, morning, noon, and night. How clearly my sweet Maria saw through that man,—and said, "he would have killed me long ago." I do not often indulge in gossip, but a man who lays himself so open is fair game.—We have to pay Bowen about \$1500 in a week or two, and I fear we shall be pretty nearly "high & dry" if we cannot make close collections throughout.—The southern agents are dreadfully "long-winded" at Washington, Richmond, etc.—What sort of arrangement did you make about the journal we have in the evening?—It is good for nothing and we want to stop it.—The De Rhams¹ and Moore's² do not see anything of us scarcely.—

IX.

New York March 8th 1843

My dear Friend.—

I was this day honoured with your note of the 6th Inst. and although I much regret your non-convenience to forward me any money at the present time, I cannot but express my sincere thanks for your allowing me to draw upon you at Ninety Days after date for the sum of Two hundred Dollars, which I have done this day, and which you will greatly oblige me by paying when at maturity.

As one of the good Friends, whom in you I have in this poor World, you must allow me to say that I trust, and that with great sincerity, that you will never dispose of the "Birds of America" until indeed you are reduced to the direst necessity, which of course can never be the case with one who possesses such a *head* as is now so powerfully poised on your good shoulders.

Health and prosperity attend you, my good Friend, and ever believe me yours,

JOHN J. AUDUBON

The Honourable
Daniel Webster³
Washington City
D. C.

X.

Fort Union, Upper Missouri. June 17th 1843.—
Thermometer. 60. 85. 70.

My Dearest Friends.—

As usual I find myself confined to a very short time, to let you know that we are all well. Three Mackinaw Boats leave this tomorrow morning at 7. and Mr Murray,⁴ a Scotch Gentleman who has the command will give this to the Messrs Chouteau⁵ & Co at St Louis who will forward it by Mail; and I hope that you may receive it sometime or other, when I feel it will be welcome to you all.—We are now pretty

¹ H. C. DeRham, Jr., subscriber to the folio 'Birds.'

² Probably Benjamin Moore, subscriber to the 8vo 'Birds.'

³ Webster was an enthusiastic sportsman and duck-hunter. He promised to get specimens of the Labrador Duck (even then rare) for Audubon, but he was unable to fulfil his promise. He subscribed for both the folio and the 8vo 'Birds,' but, to quote a phrase from another letter, he was "poor pay."

⁴ James Murray. Audubon had visited his father's farm on the Tweed on his return from a trip to the highlands of Scotland.

⁵ Traders of St. Louis. The city grew out of the post founded by August and Pierre Chouteau in 1764, and Pierre (1749–1849) gave Audubon a great deal of aid in planning his expedition up the Missouri River.

busy drawing Quadrupeds, and all possible attentions and accomodations are granted to us, and yet we are far away from home and its delightful comforts.—

I did intend to have sent you a very long letter, but my apology is above, and you must be contented to hear, that we are all positively quite well and in good spirits.—Many strange tales I could put on paper at this time, and many of them might quite astonish you, but all these I must keep embosomed with me until we meet. I can assure you however that there are no twelve pounders of brass at this Fort, and that Mr Catlin¹ is no less than a Deceiver.—Fort Mortimer who acts in opposition to this² is only 3 miles off below.—I wrote to you by the Omega on her return to St Louis only 4 days ago and as the River has been rising ever since I hope that she will have a short and prosperous passage and that you will receive my letter by her long ere you have this one.—In about 20 days Mr Culbertson,³ who has the command and management of this Fort, will go down to St Louis, and I will have a very long letter prepared in advance, that I hope may be of interest to you all.—We have seen a Wolf caught and brought to the Camp or Fort on horseback, in less than 20 minutes. It was a beautiful sight, that would have pleased you all; and Johny especially.—I have received several handsome presents from Messrs Culbertson, Kipp and Chardon,⁴ all of whom exert themselves in our favour, and of whom I will give you curious and singular accounts.—They are first rate Men, and perfectly up to the trade they all follow.—In a few days Mr Kipp goes up the Yellow Stone amongst the Crows, and Mr Chardon to the Blackfeet; the most rascally set of Indians in North America! Hunters are going out for us tomorrow morning to procure Antelopes, Mountain Rams, &c and our Patroon Provost⁵ is going to a Lake to trap Beavers and Otters for us.—We procured this morning several Lazuli Finches, and red shafted Woodpeckers.—Birds are very abundant but shy, though very rarely if ever shot at.—We hear hundreds of anecdotes daily about Bears, and all other species of animals.—I am well pleased with Sprague,⁶ who is an industrious Young Man, &c &c.—Friend Harris is still a Doctor, and has many patients on hand, consumed with defects too bad for me to name, for the Country itself is the finest I was ever in for purity of Atmosphere and healthiness.—We have bread only twice a day, morning and evening, but we have very excellent Milk, and Butter, and probably the best Catfish, found in the World.—In my next I will give you a good account of the Fort, and the surrounding country, which is so level that from one of the Bastions this afternoon I could see an area of something like 20 miles.—The country abounds in small Wild Fruits, such as Currants, Gooseberries, now pretty large, and many others.—Wolves may be shot from the Fort almost every night or day.—I have a fine young Badger alive, which I hope to take home.—Sprague and I have been busy drawing all day, and Bell⁷ shooting and skinning pretty much as long as we. I hope that you are all well and Happy, and

¹ George Catlin (1796–1872). His 'Manners and Customs of the North American Indians' was published in 1841. It is only fair to state that in the interval between Catlin's travels and Audubon's, the Indians had suffered seriously from disease, but Catlin was inclined to paint too happy a picture.

² i. e., belong to the "opposition company." These forts were not military establishments, but trading posts of the fur companies.

³ Alexander Culbertson, an Englishman and a celebrated rider and shot.

⁴ Kipp and Chardon were fur traders and Kipp, at least, was a partner in the American Fur Company.

⁵ Provost accompanied Audubon's expedition as a guide and hunter.

⁶ Isaac Sprague, artist of Boston. He was particularly noted as an illustrator of scientific books and as a landscape painter.

⁷ John G. Bell (1812–1889), celebrated New York taxidermist.

all with you goes comfortably.—Take care of yourselves until we meet again.—Remember me kindly to Friends Hall and Augrave¹ the Doctor and everybody, not forgetting Henry Mallory² and the Mother and Young Daughter &c &c &c Take great care of Dearest Mother and the Darlings, for all of whom, and in fact You All I am having some Moccasins made.—God bless You All, and now again and again believe me forever, Your Affectionate Husband, Father and Friend

JOHN J. AUDUBON

Do not forget to write to St Louis once a month at least, and kindest regards to all the Chouteau³ family at N. Y.

V. G. Audubon Esqr
77. William Street
New York

¹ Clifton Augrave of New York. Subscribed to the 'Quadrupeds.'

² Brother of Georgiana Richards Mallory. She was the second wife of V. G. Audubon.

³ Charles P. Chouteau lived in New York at this period. He was a subscriber to the 8vo 'Birds' and the 'Quadrupeds.'

AN HISTORIC COLLECTION OF BIRDS.

BY SAMUEL A. ELIOT, JR.

For a forthcoming book on the birds of the Connecticut Valley in Massachusetts, a history of ornithology in the Valley seemed desirable. The oldest document was the 'Catalog of the Birds found at Springfield, Mass., with Notes on their Migrations, Habits, &c.,' by J. A. Allen, communicated to the Essex Institute, of Salem, Mass., on May 2, 1864, and published the following September in Vol. IV, No. II, of the 'Proceedings of the Essex Institute.' A copy, still in its original paper covers, on which are written the names Otis Fuller, 1868, and E. H. Forbush, 1921, was luckily obtained and proved most interesting, both historically and as a source from which to quote under each species. Further research brought us the 'Autobiographical Notes' of Joel Asaph Allen published by the American Museum of Natural History in November 1916, from which we admiringly learned that in his 'teens, the early 1850's, Allen had shot, measured, weighed, described and provisionally named a great many of the birds about his father's farm near Springfield, before he knew that any books had been written about them and that they all had names already, "Latin as well as English." We wished we could examine those early note-books and the original names therein! Later, Allen obtained a copy of the Brewer edition of Wilson's 'American Ornithology,' and discovered Nuttall's and Audubon's works in the Springfield public library. He also learned to mount birds, and "during the years 1859-61, I collected and mounted some 300 birds representing nearly 100 species, as attested by my catalog, still extant." We wished we could examine that catalog too! Is it *still*, perhaps, extant, at the Museum or elsewhere?

But what became of this collection? Reading on, we found that while he was making it Allen was attending, in winter, Wilbraham Academy, and met there a pupil eager to study natural history under Agassiz at Harvard. In order to raise the money necessary to go and do the same, Allen in 1861-2 sold his collection to Wilbraham Academy. Is it, perhaps, still there? Exciting thought! A letter to the Academy brought answer that it actually was, and in August 1934 it was shown to me.

Alas, it had not been displayed or used for many years! The tall case, glass-doored on both sides, was stowed in a basement against a wall and behind piled up tables and junk. The latter however were moved for my benefit enough to admit me to most of the glass doors, and by stretching I was able to pull into view all the birds on the near side and crowd them together; then reach over the top of the terraced shelves and with blind feeling and fumbling extract the birds on the far side. A black dust of

age and neglect lay thickly over everything. The labels, little squares of paper inscribed in capitals, apparently by some old-fashioned type-writer, had mostly lost contact with their specimens and lay all over the shelves, sometimes in piles, so blackened on the upper surface that when that surface was the typed one its legend could hardly be read. There were far more labels than specimens, and many of the specimens that had not yet disappeared were falling apart or losing their tails. Except for a few Hawks, Owls, and "picarians" they were all passerine birds, which was a disappointment as I had hoped to find in this collection a basis for such striking entries in the Catalog of 1864 as "Crested Grebe, rare winter visitant" (in addition to Holboell's), "Buff-breasted Sandpiper, rare spring and autumn visitant" (there has been, since 1864, not one confirmatory record), and "Willet, spring and autumn visitant, not common; perhaps a few occasionally breed." Spring visits of the Red-backed as well as the Buff-breasted Sandpiper, and of the Golden Plover, were mentioned in the Catalog, whereas (contrary to present-day experience) the Least and Pectoral Sandpipers were limited to an autumn season. But the only water birds in the collection were at the bottom of the case, where I unearthed the huge, hard-stuffed skin of a Rock-hopper Penguin, a standing pair of American Mergansers and male Hooded Merganser, the un-made-up skins of a Loon and a Snowy Owl, and the wings (only) of an immature Golden Eagle. These bore no numbers and had probably no connection with Allen. All his birds, except a male Hummingbird mounted beside a nest, were wired on T-perches, to which were tied small tags with numbers. The highest number noted was 358, so Allen's autobiographical "some 300" had been characteristically modest. The labels fortunately bore these numbers as well as a date (month and year, never day) and the English and Latin names (no sex-signs) that Allen had given his birds; and where the specimen still existed, it could be checked against the label. And here began my discoveries!

"No. 1, Winter Buzzard, *Buteo hyemalis*, October 1860." *Buteo hyemalis* (Gmelin) appeared in all three of Allen's authorities—Wilson, Nuttall, Audubon—but it has usually been identified with the immature Red-shoulder, whereas this "No. 1" was a young Red-tail. The name is not in the 1864 Catalog, for by then Allen had straightened out all the Hawks but one: he still thought *lagopus*, the Rough-leg, different from *sancti-johannis*, the Black Hawk. Under Pigeon Hawk I see that he noted in the Catalog "Very rare: May 7, 1861, I obtained a male in perfect adult plumage," and that very Pigeon Hawk (it must be, though its label is missing), vivaciously mounted with wings half open, is one of the most beautiful, striking, and best-preserved birds in the collection. There are a few other attractive specimens (the big birds were at the top, where the least dust would accumulate)—an adult Goshawk, for instance, "quite common in

the winter of 1859-60" says the Catalog—but the most immediate attention is claimed by five Passenger Pigeons, all taken in May 1861, of which four are resplendent males, the fifth (No. 9) a female, notably pallid and doubtless faded but valuable because this sex is so much scarcer in collections than the male. Near them are a pair of the almost-as-extinct "Old New England Bob White." Also interesting, giving me pause as I move the specimens about, are the pair of Mockingbirds taken June 20, 1860, together with their nest and three fresh eggs (nest and eggs, if ever part of this collection, are so no longer), and the adult male Orchard Oriole secured in the same month. In June and July 1860, I see by their labels, were collected Parula Warblers Nos. 184-5,—substantiating Allen's statement in 1864 that this species, now among our rarest summer residents, then nested commonly,—and in July 1861 fell this Olive-sided Flycatcher. Missing, alas, is specimen 267, but its label speaks for it: "Red-headed Woodpecker, September 1859." In the Catalog of 1864 Allen said he had taken but two of these birds in five or six years. His vexing loss of a still rarer Woodpecker, the Red-bellied, which escaped him after being shot, occurred later (May 13, 1863); but a third member of the family graces this collection—to me the most thrilling bird in it, for it was almost the last that I extricated from the dark far side of the case, and no label had fore-warned me of its presence. Leaning far over the grimy shelves, I felt and pulled out—an Arctic Three-toed Woodpecker. This was the bird recorded in the Catalog as shot in January 1860, but nowhere has it ever been recorded that its sex was female. Ascertaining this, I felt almost as much excitement as I might on discovering a live *Picoides*!

Blowing the dust off another label, I read "No. 254, Sharp-tailed Finch, *Ammodromus caudacutus*, May 1860." What's this? No Sharp-tail was included in the 1864 'Birds of Springfield'! None was recorded in our Valley till 1909, when on page 84 of Vol. 26 of 'The Auk,' R. O. Morris noted that a specimen of the Acadian Sharp-tail, now in the Springfield Museum, had been collected at Longmeadow on October 6, 1908. Where is specimen 254? Right under my hand! I carry it to the window, and recognize Lincoln's Sparrow. Of that species Allen in 1864 wrote "Shot one in May 1860 and another May 14, 1863. No account of its previous capture in New England." So the frail specimen I am holding is the first Lincoln's Sparrow ever taken in New England! And why unrecognized, mis-labelled? Why, because Allen was doubtless using Wilson and Nuttall,—so his books described no Lincoln's Sparrow! At least, he had seen that this was no Song or Swamp Sparrow, and on the strength of its fine-streaked, buff-washed breast had called it Sharp-tailed—until, with more up-to-date book-knowledge, he shot the 1863 bird and recognized the identity of both. With considerable emotion I placed the label back on the T-stand, the unique bird back in the case.

Here now is another label: "No. 256, Mourning Warbler, September 1860." In 1864 Allen wrote of the Mourning Warbler "Have taken two specimens about the middle of September." This had struck me as odd, since nowadays the bird is identified here fully fifty times as often in May as in fall, whereas the Connecticut Warbler is fairly common from mid-September to October 8. Of the Connecticut Warbler, Allen in 1864 could only write "may probably be found as an extremely rare species, but I have not known it detected here." Where, now, is specimen 256? It cannot be found; but in the search I come upon specimen 358, an evident Oporornis, and take it to the window. An immature female Connecticut! A species Allen never knew he had shot, skinned and mounted! "Two specimens," he had written, of the Mourning Warbler had fallen to his gun in mid-September. One of them must have been this Connecticut I hold, for which no label can be found; the other has disappeared, leaving its label, and we shall never know which Oporornis it was; but we surely can suppose that if the two specimens had been of different species Allen would have perceived their unlikeness and not called both of them *philadelphus*: hence that it was really the Mourning, not the Connecticut, which until 1864 he had never "detected," and the Connecticut of which these specimens, or this surviving specimen, is the earliest ever taken in Massachusetts except for one recorded by Dr. Samuel Cabot, Jr. in the 'Proceedings of the Boston Society of Natural History' (Vol. II, p. 63) as taken at Berlin in the summer of 1845.

Two other Warblers, side by side, with labels still upright on their stands, are Nos. 158, April 1861, and 159, May 1861. Both are entitled Yellow Redpoll Warblers, but I can see a suspicious difference between them. I take them to the window:—yes, the May bird is a Western Palm! Its gray underparts cannot be due to fading (terribly as some of these specimens have faded!), because its companion, the April bird, is still yellow. Of course, the two forms were not separated until long after 1861, or the Catalog of 1864, but all the same we here behold the first (and until very recently the *only*) Western Palm Warbler ever taken in New England in spring! Those two dusty little specimens, still side by side, ought to be prominently displayed, with explanatory label, in the big Museum at Springfield.

Another species not subdivided until after these dates is *Quiscalus quiscula*, the Grackle; so I study with interest specimen 18, "Purple Grackle —J. C. Burke," apparently the only bird in the collection that was shot by another than Allen. It is a Bronzed Grackle but has traces of iridescent bars on the wing-coverts. Specimen 242 next attracts me, because though labelled Olive-backed Thrush it looks like a Gray-cheek. As a matter of fact, Allen contended stubbornly for years that these two Thrushes were "phases" of one species: two whole pages of his 1864 Catalog are devoted

to the problem. "Detecting *Turdus 'aliciae'* among specimens I had collected," he there wrote, "and many specimens intermediate in color between this form and strongly marked *T. Swainsonii*, I began to search for some more constant character than color to separate the two forms, and found by extensive measurements that both the largest and the smallest specimens occurred in the form recognized as *T. Swainsonii*. I have carefully studied the bills, feet, wings, size and proportions for specific differences, and find that, though there is more or less variation in all these, as there is among individuals of almost every species, there is nothing that approaches to constant specific difference. Indeed, the principal character that has ever been urged as separating them is that of color; but . . . I have had specimens before me during the last year exhibiting every gradation in the color of the breast, sides of the neck, eye circle, &c., from the strongly buff-tinted true *T. Swainsonii* to the pale gray of typical '*aliciae*,' where the buff was scarcely perceptible or quite obsolete . . . The gradations from one extreme to the other are so minute and complete that the state described as *T. aliciae* can now be considered hardly 'a very strongly marked variety'"—and he goes on to say that parallel color-gradations are to be seen in the Veery. Well, as to the Veery, one specimen here, so labelled ("253, Tawny Thrush, *Turdus fuscescens*"), is unmistakably a Hermit, so we begin to doubt the ability of young Allen, before his studies under Agassiz at Harvard, to discriminate among Thrushes; but specimen 242 is too faded for me to feel certain which thrush it is: I put it aside, and two months later take Mr. Ludlow Griscom to view the collection. "Gray-cheeked," he says of it at once—and nowhere among the remaining specimens can he find a single Olive-back!—so here again Allen has preserved for us, under another name, an early specimen, even possibly the earliest in the state, of a species he refused to recognize! As to the race of Gray-cheek, Griscom is in doubt. Its wing-length matches exactly that of an adjacent Veery, but this causes merely a presumption that it belongs to the larger form. The great variation in size of the Gray-cheeked and Bicknell's Thrushes that migrate through Springfield might well have confused Allen, but both the largest and the smallest of his specimens were assigned by him to *swainsoni*! What a pity that he took no notice of songs and calls, for by ear much more readily than by eye can the species of Thrushes be distinguished.

Another group with which Allen had trouble (and in which a discriminating ear might have helped him even more) was the genus *Empidonax*, for here again his early books misled him. They told him only of the Acadian Flycatcher. All four—*acadicus*, *Traillii*, *minimus* and *flaviventris*—are included in his 1864 Catalog, and the authority for each is "Baird," following a custom then prevalent of citing the authority for the full name

instead of for the specific name only. Allen's annotations are fullest on *acadicus* ("Under *Muscicapa querula*, Small Green-crested Flycatcher, Wilson . . . has very correctly indicated the habits and notes of this species" etc.), but as he afterwards acknowledged, all his own vivid annotations were really based upon, and refer to, what we now term the Alder Flycatcher. In 1861 when the Wilbraham collection was made he knew even less about the genus than in 1864: three of the specimens, taken in April 1861, are Chebees but are labelled, as from his books we might expect, Acadian. A fourth, No. 351, for which no label turned up, is an Alder (on Mr. Griscom's authority: it was too far gone for me to identify). The odd puzzle is a label "No. 205, Yellow-bellied Flycatcher, Empidonax flaviventris, May 1861." The specimen tagged 205 is a Yellow Warbler—a Yellow Warbler with the tip of its bill broken, giving it a blunt, slightly Flycatcherish contour—yet the Warblers of the collection are so well understood and identified that I cannot believe this error was Allen's: if not mere accident, perhaps some friend who knew that the Bairds had distinguished a Yellow-bellied Flycatcher, but no more about it than that, persuaded Allen into accepting as such this Summer Yellowbird.

Scanning label after label, I note some arresting dates. A Tree Sparrow is labelled June 1861, but presumably the typist misread Allen's "Jan." as "June." Unusual but believable are: Bluebird February 1861, Marsh Hawk March 1861, White-throated Sparrow March 1861 (perhaps a mistake for May), Rose-breasted Grosbeak April 1860, and Crested Flycatcher September 1860. Of the Richardson's Owl recorded in the Catalog as obtained in December 1859 neither specimen nor label turned up; and the Raven collected in the same phenomenal fall belonged to C. W. Bennett, not to Allen. The winter of 1859–60, already noticed under Goshawk and Arctic Three-toe, must have been rich indeed with northern visitants. Specimens of both kinds of Crossbill are here, labelled January 1860, and Mr. Griscom on his visit spotted one (No. 115) whose long, gross beak marked it as the Newfoundland subspecies, *L. c. pererna*. We know of no other evidence that this race of Crossbill has ever visited our valley. In the Catalog, the winter of 1853–4 is given as bringing Red and White-winged Crossbills to Springfield, and that of 1859–60 as a Pine Grosbeak season. The Pine Grosbeak specimen here, however, (of undetermined subspecies) is dated November 1860. A Snow Bunting is here, without label, but there is no trace in this collection of such frequent winter visitors as Shrikes and Larks. The Migrant Shrike and Prairie Horned Lark, coming as they both did from the West, are not at all likely to have reached Springfield by the early '60s, yet a specimen of either family might have been interesting. There are many other species, even of song-birds, which appear in the 1864 Catalog but not in the 1861 collection, though there

remain in the old case, even now, at least 104 species, not the modest "nearly 100" mentioned in Allen's autobiographical notes. The dismal neglect into which the collection fell will likely now be remedied, and perhaps the more important specimens, historically speaking, can be rescued and enshrined in the Springfield Museum. At any rate, it was a stirring experience to rediscover them, identify among them races and species unsuspected by their collector, and feel in handling them the work of the patient, enthusiastic fingers of one who was destined to lead American ornithology. How could he have dropped this early work, those 'prentice years, so far behind as never to return to his old school, see once again his lovingly prepared collection, and note in it himself the misidentifications or since-separated subspecies for which we, so long afterwards, here bespeak attention? Let those who knew him find an answer to this query in his character; we shall at least pay homage to his memory as the pioneer ornithologist of our Valley, and credit him with these new, early records.

Smith College, Northampton, Mass.

A NEW BLUE JAY FROM THE WESTERN BORDER
OF THE GREAT BASIN.

BY GEORGE MIKSCH SUTTON.¹

In my paper upon the birds of the Western Panhandle of Oklahoma² I call attention to the fact that Blue Jays from "extreme northwestern Oklahoma, western Kansas, and eastern Colorado" appear to represent a "westerly ranging race of *Cyanocitta cristata* that is different from any known eastern race . . ." (p. 30). I did not propose a name for two reasons: first, I had not examined any specimens from the westernmost portion of the species' Canadian range; second, I feared that the paleness of breeding specimens from Colorado and Kansas might be the result of midsummer fading and wear.

Recently I have had opportunity to examine many additional specimens, including several from western parts of Canada; and the consistent paleness of birds from the eastern foothills of the Rocky Mountains and western portions of the Great Basin (in freshly plumaged fall specimens as well as in breeding specimens) convinces me that these belong to a recognizable race that I propose to call

Cyanocitta cristata cyanotephra subspecies nova.

Type, No. 5252, Collection George M. Sutton, adult male; Kenton, Cimarron County, Oklahoma, September 29, 1933; John B. Semple.

Subspecific characters: Similar to all races³ of *Cyanocitta cristata* found to the east-

¹ The author wishes to thank the following persons for assistance in the preparation of this paper: Dr. H. C. Oberholser, of the U. S. Biological Survey, Washington, D. C.; Dr. Francis Harper, of Swarthmore, Pa.; Mr. Percy A. Taverner, of the Canadian National Museum, Ottawa, Ontario; Mr. C. D. Bunker, of the University of Kansas, Lawrence, Kansas; Mr. J. D. Figgins, of the Colorado Museum of Natural History, Denver, Colorado; Mr. W. E. Clyde Todd, of the Carnegie Museum, Pittsburgh, Pa.; Dr. Josselyn Van Tyne and Mr. Pierce Brodkorb, of the University of Michigan, Ann Arbor, Michigan; Mr. C. F. Walker, of the Ohio State Museum, Columbus, O.; and Professors A. I. Ortenburger and R. D. Bird, of the University of Oklahoma, Norman, Okla.

² Sutton, George Miksch. Notes on the birds of the Western Panhandle of Oklahoma. *Annals of the Carnegie Museum*, XXIV, 1934, pp. 1-50.

³ Names of these races I have purposely omitted, first because I have not compared breeding birds from southeastern South Carolina, the region designated by Oberholser (Auk, XXXVIII, 1921, 83) as the type-locality of Linnaeus's '*Corvus cristatus*', with breeding birds from Putnam County, Florida, the type-locality (as given in the present A. O. U. Check-List, 1931, 221) of *C. c. florincola* Coues; second, because there is apparently no way of determining beyond question that Catesby's drawing and description of '*Pica glandaria caerulea cristata*' (following which Linnaeus wrote his description of '*Corvus cristatus*') were based wholly upon breeding birds rather than upon transient or winter visitant individuals from regions to the north of South Carolina. At the present writing it appears to me that breeding Blue Jays from southeastern South Carolina and from northeastern Florida must certainly be the same; that Catesby's drawing and description are, as Oberholser believes, of "the small purplish blue race with narrow white wing and tail edgings" (*Ibid.*, 85); that *C. c. florincola* Coues is therefore a synonym of *C. c. cristata* (Linnaeus); and that the Blue Jay of the northeastern United States must be known as *C. c. bromia* Oberholser.

[Cf. however, Auk, 1929, pp. 447-454, where the question is fully discussed and the first revisor principal, later adopted by the A. O. U. Committee, advocated—Ed.]

ward of the Mississippi, but coloration paler, especially on the crest and back; paler even than *C. c. semplei* Todd, from which it differs also in being decidedly larger¹ and relatively smaller-billed; and much paler than birds from Michigan; Minnesota; Ontario and southeastern Canada; and the northeastern United States. White markings of wings and tail noticeably more extensive than in *semplei*, and somewhat more extensive than in breeding birds from Georgia, Louisiana, and northern Florida.

Remarks: The paleness of all Colorado, extreme western Oklahoma, and Kansas specimens at hand (forty-nine in all) is apparent when these are placed alongside comparable series from Whitfield, Florida; Charlton County, Georgia; Jefferson Davis County, Louisiana; Tompkins County, New York; and various localities in Minnesota, Michigan, Ontario, Ohio, and Maine.

Mr. Todd (Auk, XLV, 1928, 364) describes the pileum of *Cyanocitta cristata semplei* as "deep plumbago blue" of Ridgway. The pileum of *cyanotephra* is paler, bluer, and less purplish than in *semplei*, closer to Ridgway's "aniline lilac." The back, too, is somewhat bluer or more blue-gray than in *semplei*, being close to "deep violet-plumbeous."

Many of the twenty-eight Kansas specimens at hand are so worn, faded, or discolored as to be of little use in the present study; but fall birds in fresh plumage from Lane, Comanche and Norton Counties are pale, and breeding birds in good feather from eastern parts of the State are noticeably paler than Louisiana and eastern Oklahoma specimens. All available Minnesota specimens are far too dark for the present race; Manitoba specimens apparently tend to be a trifle paler than eastern Canadian birds; and a single male from Alberta (Lac la Nonne, June 28, Canadian National Museum No. 21512) is decidedly paler than any other Canadian specimen at hand, especially on the crest.

It is my present belief that the most typical examples of *cyanotephra* are to be found in extreme western Oklahoma, where the Blue Jay is decidedly rare as a breeding species, in eastern Colorado; in western Kansas; and in the northwestern corner of the northern Panhandle of Texas; but that the race ranges throughout Kansas and northern Oklahoma (save in treeless regions); throughout Nebraska (save presumably in the northeastern part where the race found in Minnesota should occur); and along the eastern foothills of the Rocky Mountains to the northwestward of Nebraska. I have thus far not examined any specimens from Nebraska and the Dakotas.

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¹ A male example of *semplei* (Cornell University Museum No. 5235) measures: bill (tip of upper mandible to anterior margin of nostril), 18 mm., wing, 126; tail, 118; tarsus, 33. Ten male *cyanotephra* measure: bill, 18–20.5 (average 19.1) mm.; wing, 132–141.5 (average 137); tail, 129–135 (average 131.6); tarsus, 34–36 (average 34.7). The type of *cyanotephra* measures: bill, 18 mm.; wing, 138; tail, 134; tarsus, 35.

GENERAL NOTES.

Color Changes in the Head of the Single-wattled Cassowary (*Casuarius unappendiculatus occipitalis*).—The colors of the bare skin areas of the head and neck in Cassowaries have been used so extensively as taxonomic characters that it may be of interest to record the extent of color changes in an adult *Casuarius unappendiculatus occipitalis* in the National Zoological Park. It is well known that in some birds the colored parts become more vivid or intense under excitement of emotional stress. The relative color values of the different areas are maintained, each being fairly equally intensified. In this particular Cassowary, however, the distinctive shades of the hind neck and foreneck, are lost during the intensifying process, suggesting a different local degree of response to excitement.

The plate of *C. u. occipitalis* in Rothschild's monograph of the Cassowaries (Trans. Zool. Soc. Lond., XV, 1900, pl. xxxi) is the nearest of any of his pictures to the present bird but differs in the following respects. The hind neck is there depicted as deep blue like the face and fore neck whereas in the bird watched the hind neck was very much lighter, approximately calamine blue; the lower neck was deep yellow, not orange as in the plate; the pendent wattle was deep crimson, slightly paler at the tip (figured as bluish gray by Rothschild); the bare sides of the neck were deep crimson similar in color to these areas in the plate.

When the bird was excited the facial wattles became enlarged and took on the appearance of small air sacs; the face and upper neck became darker blue, about Hay's blue while the hind part of the upper neck turned to deep blue similar to the face in the resting stage; the lower hind neck became dark orange; the front part of the lower neck, the pendent wattle, and the bare sides of the neck became vivid crimson, the intensification being very striking in the bare areas extending down the sides of the neck. The small yellowish occipital patch did not change under excitement. The iris, normally light brown, near antique brown, turned darker, like raw umber in shade. The successive dilation and contraction of the pupil was also greatly accelerated when the bird was excited, giving it a rather fierce expression.

When the bird is excited the feathers become ruffled, especially those of the rump, and the wing quills stand out more from the body than while at rest.

This bird has been in the National Zoological Park for six years; it was in the brown plumage of immaturity when received and assumed adult plumage within two years after arrival.—MALCOLM DAVIS, *National Zoological Park, Washington, D. C.*

Pacific Loon on the Lower St. Lawrence River in July.—On July 17, 1934, while returning from an automobile trip to the Gaspé Peninsula in eastern Quebec, the writer saw a Pacific Loon (*Gavia arctica pacifica*) swimming near shore in the waters of the lower St. Lawrence River between Ste. Flavie and Rimouski. The bird was seen under good conditions, attention first being attracted by its slender bill, suggestive of the Red-throated Loon. The bird was in full summer plumage and all its markings were plainly noted, except that the back of the head and neck did not appear as gray as in museum specimens since examined. My only previous experience with the Pacific Loon was a bird in winter plumage seen at Rockport, Mass., and identified by L. Griscom and F. H. Allen, but I am very familiar with the Common and Red-throated Loons in both summer and winter plumages. My son Edward, who was with me, checked my identification of the St. Lawrence bird.—JOHN B. MAY, *Cohasset, Massachusetts.*

The Leach's Petrels of Penikese Island, Massachusetts.—Since reading Mr. Arthur H. Norton's note on Leach's Petrel (*Oceanodroma leucorhoa leucorhoa*) in 'The Auk' for January, 1934, I have been hoping to get further information of the Penikese Island birds, but as the season of 1934 has gone by without bringing anything in the way of a specimen to clinch the record, it seems best to give now what little I have to say in addition to the report of Dr. Townsend and myself in 'The Auk' for October, 1933. I shall have to admit in the first place that Mr. Norton has caught us on a point or two. Both of us knew of the Seal Island, Nova Scotia, colony—in fact, Dr. Townsend had himself seen it, in 1920—and we were also well aware of the fact that Seal Island is farther south than Matinicus Rock, but at the time of writing our note we were thinking more of the distance of the nearest known colony of Leach's Petrel from Penikese and, not having a map showing Nova Scotia by us at the time to remind us of that colony, we simply forgot about it. This, of course, is an explanation, not an excuse for our error. For the Maine records we relied implicitly upon Forbush's 'Birds of Massachusetts,' which states on the authority of Mr. Norton himself, that the species "breeds as far west as Muscongus Bay," which, though farther west than Matinicus Rock, is not so far south. I think we had the right to assume that Mr. Forbush had considered all the available records when he wrote up the species for his book. It is now of interest to note that Mr. Norton confirms earlier records extending the range on the Maine coast to Casco Bay.

In spite of Mr. Norton's apparent skepticism as to the breeding of Leach's Petrel at Penikese, I still think that the evidence that the birds regularly haunt the island in the breeding-season, and go in and out of holes at the bottom of a retaining wall there, is irrefutable, and that this evidence is for all practical purposes conclusive as to the actual breeding, and I know that Dr. Townsend felt the same way. It seems next to impossible that birds of a species that is not known to come ashore voluntarily, except to breed, should come year after year to Penikese and be heard there night after night in the breeding-season unless they were there for the purpose of breeding.

It is unfortunate, of course, that circumstances have prevented as yet the taking of either eggs or young there. An attempt was made in August, 1933—after our visit to the island—by Dr. Oliver L. Austin, Jr., and Mr. Maurice Broun. Dr. Austin permits me to give an account of their efforts and observations. They stayed up all one night and had an excellent view of the birds, one of which came within ten feet of them and sat on the wall "in very plain sight." They spread before the entrance to the hole that the birds were known to use a net such as is used in the banding operations of the Austin Ornithological Research Station, but the Petrels avoided it, evidently seeing well in the dark. The next morning they made an attempt to tear down the wall at this point but found that the boulders composing it extended back ten or fifteen feet into the hillside and that the eighty yards of wall was such a honey-comb of passages that the cost of a thorough investigation would be prohibitive. To bring the case up to date, I can report that the flight song of the Petrels, now well known to the men who visit Penikese to band Terns, was heard there in July, 1934, by Messrs. Laurence B. Fletcher, Henry Endicott, and Orrin C. Bourne.

I should like to place on record a description of the notes of Leach's Petrel as heard at Penikese. The rhythm of the flight song was remarkably uniform, though the tone varied, being sometimes rather sweet and pure, sometimes harsh and rasping. It may be represented by the syllables *wick'-ah wick'-ah wi-hi-hi-hi-hi*, the last five notes descending and producing the crowing effect mentioned by Chapman in his 'Handbook.' The whole seemed to me to consist of nine syllables instead of the eight

given by Chapman. It can best be imitated by half whistling, half whispering the syllables. The notes heard in the hole under the wall were of an entirely different character. They consisted of a rapid purring trill followed by a higher, accented note and then a lower note. A very unsatisfactory rendering of this rather pleasing performance might be *br-r-r-r-r-aw' chum* (the *u* as in full). This phrase was repeated over and over again in quick succession.—FRANCIS H. ALLEN, *West Roxbury, Mass.*

White Pelicans in Florida.—On December 21, 1934, accompanied by Miss C. M. Williams of Cambridge and Miss A. W. Pearse of Roxbury, Mass., I made a boat trip through part of the Ten Thousand Islands region south of Everglade, Florida, under the pilotage of Capt. 'Phonse Lopez of Everglade, in search of Roseate Spoonbills and other birds. At an unnamed pond among the mangroves, we were surprised to find a flock of White Pelicans (*Pelecanus erythrorhynchos*) which we estimated as about six or seven hundred birds. As we approached the flock flew, circling around over the pond in a most impressive manner. As I watched them, I became aware of a long line of birds in the distance, approaching from the south, which turned out to be another flock of about two hundred birds. A third line of perhaps a hundred followed these and the three flocks united, circling around over the pond and the surrounding mangroves for some time, when part of the flock left towards the north and the remainder, as we withdrew, alighted again on the pond.

I had seen the White Pelican at Yellowstone, at Klamath Lake, and near Salt Lake City, but never in such large numbers or under such impressive circumstances. I find no mention of any such concentration of White Pelicans in Florida in recent years (John Muir, in his 'Thousand Mile Walk to the Gulf' in December, 1867, speaks of "the pelicans that frequently whiten the shore like a ring of foam"), and Howell in his 'Florida Bird-Life' reports only one flock containing a hundred birds, though he mentions numerous small flocks. The total number we saw on December 21 must have been close to one thousand birds.

The same day we saw about fifteen Roseate Spoonbills, two Frigate-Birds, a few Great White Herons, as well as many other Herons, Ibises, etc. The preceding day, at Sarasota, we had seen eleven Eastern Glossy Ibises.—JOHN B. MAY, *Cohasset, Massachusetts*.

A Sight Record of the Red Phalarope (*Phalaropus fulicarius*) in Northern Idaho.—On October 13, 1934, while walking along the banks of the St. Joe River near the town of St. Maries, I saw a lone Phalarope swimming in the muddy ditch on the landward side of the dike. At this time of the year the back-wash from the river forms an extensive mud flat beyond the narrow drainage ditch, and as the bird was loath to leave the water, I could easily view it with seven-power binoculars at a distance of less than fifteen feet.

Having observed the Wilson's Phalarope in this locality on several occasions, I was immediately aware that this was a totally different bird, and not being so familiar with the Northern, at once assumed it to be that species. However, past experience in similar cases led me to take notes on the spot and it was well that I did so.

After observing the bird at leisure upon the water, I attempted to force it to flight by tossing small clods in the water near it, but instead, it merely swam to the opposite bank of the ditch and walked stiffly out on the mud flat. Here it stood for several minutes in a rather dejected attitude and only after one of my missiles barely missed it, did it deign to fly a few feet, showing the prominent white wing-pattern. It was of course in the fall plumage and appeared to be fully adult, though rather bedraggled. When it left the water, the large amount of white and its general form

led me to think at once of the Sanderling, while in flight it uttered a single weak, but rather shrill peep. My notes as they were taken during observation of the bird include the following diagnostic characteristics: Head and underparts white, except for a dark (almost black) hind neck and spot behind the eye; legs and feet appear dusky or bluish gray—decidedly *not* black; back gull-blue, apparently unmarked; size, scarcely smaller than a Wilson's Phalarope, but shorter legged, thicker necked and with a shorter and stouter bill. When I returned past the spot an hour later, the bird was again swimming in the ditch, but on the following day when I came back determined to collect the specimen, it remained in a pool far out in the treacherous mud flats and the third day it was gone.—R. L. HAND, *St. Maries, Idaho.*

The Louisiana Heron in Oklahoma.—While collecting birds in Dewey County, Oklahoma, along the North Canadian River, I took two specimens since identified as the Louisiana Heron (*Hydranassa tricolor ruficollis*). These specimens, both females, were taken July 21 and July 23, 1934, respectively, and are now in the collection of the University of Kansas Museum of Birds and Mammals. Apparently this Heron has not been previously reported from Oklahoma.

At the time I was camped along the river, the stream was very low, the water standing only in pools about one-fourth mile apart. These pools teemed with small fish, which attracted large numbers of water-birds. At dawn or at dusk I frequently observed Louisiana Herons in groups of as many as six or eight, feeding in company with the Green Heron, and Yellow-crowned Night Heron.

My thanks are due Mr. C. D. Bunker, of the University of Kansas Museum of Birds and Mammals, for permission to submit this note, and to Mr. W. S. Long of the same institution, for the identification of the specimens.—A. B. LEONARD, *Dept. of Zool. Univ. of Kans.*

Red-Legged Black Duck in West Virginia.—In view of the fact that the 1931 'Check-List' recognizes the Red-legged Black Duck (*Anas rubripes rubripes*) as a separate race, I wish to record that there is in the museum of West Virginia University, Morgantown, W. Va., a female Black Duck with very bright red legs, clearly referable to this subspecies. The specimen was taken by Mr. P. C. Bibbee near Hanna, Wood County, W. Va., on March 9, 1924.

I am aware that many ornithologists hold grave doubts as to the validity of this race, but until its status is cleared up, the bird should be included on the West Virginia list. This is, so far as I know, the first published West Virginia record for the subspecies.—MAURICE BROOKS, *Dept. of Biology, West Virginia University, Morgantown, W. Va.*

Ring-necked Duck (*Nyroca collaris*) at Lonsdale, Rhode Island.—The writer saw a drake of this species on the Blackstone River between Lonsdale and Berkely on February 22, 23, 24 and 25, 1933. The bird was carefully examined with 7x binoculars at a distance of only forty yards, and was continually in the company of three female American Golden-eyes (*Glaucionetta clangula americana*). This constitutes the first twentieth century record for Rhode Island. There are two old records, one taken at Easton's Pond, Newport, on Nov. 11, 1871, and another taken, also at Newport, no date given, by Col. J. H. Powel and said to have been sent to the Academy of Natural Sciences of Philadelphia, but while several of Col. Powel's birds are in the Academy's collection, Dr. Witmer Stone informs me that there is no record of this specimen ever having been received.—ALFRED E. EYNON, *Lonsdale, R. I.*

Apparent Skin-transplant in a Wild Scaup.—On December 23, 1934, Mr. Donald McKellar of Garden City brought me a male plumaged Greater Scaup

(*Nyroca marila*) recently shot at Moriches Bay, Long Island, with a broad-oval area about $2\frac{1}{2} \times 2$ inches in diameter of what seemed like white belly-feathers rising as a low mound in the middle of its back, which, before this oval, was somewhat vermiculated, behind its solid black. Close inspection showed that these white feathers were somewhat marked with pale gray, much as on the belly of the same bird, especially at the front of the oval.

The bird was skinned out at the American Museum of Natural History where it is now No. 300514. Messrs. J. T. Zimmer and R. B. Potter of the Museum examined it carefully and we agreed that the feathers were belly feathers in texture and otherwise, probably a skin transplant. The skin to which they were attached and body beneath were in reasonably healthy condition, but the skin was too ample forming a shallow pocket, and somewhat thickened at the apex of the pocket. Immediately below the surface, in the bone under this pocket was a pellet of shot which evidently had not recently entered from above, but may have penetrated the body of the bird from below when it was killed and lodged there by chance.

Aside from some antecedent improbability in a wild Scaup, this looks like a clear case of skin transplant. If so it is hoped that some reader of 'The Auk' may be able to throw light on the bird's history. If, on the other hand, we have here an abnormality or peculiar result of an injury, the case has considerable interest.—J. T. NICHOLS, New York, N. Y.

Blue Geese (*Chen caerulescens*) on the Tuckerton, New Jersey, Marshes.—On November 11, 1934, two adult Blue Geese and a Snow Goose, standing on the open salt marsh at Tuckerton, New Jersey, offered rare opportunity for identification.

With the sun behind the observers, the birds were approached by automobile within about one hundred and fifty feet, at which distance the black "grinning recess" of the bill could be clearly seen. Both had white heads. Each side of the white neck and nape of one, the paler of the two, was marked with a vertical streak of dusky gray blending into the dark of the lower neck. The entire head and upper neck of the other bird were white. Their feet were pinkish or flesh-colored. In flight the rump and upper tail appeared lighter than the back and wings.

The wing expanse of the Snow Goose was slightly greater than that of the Blue Geese; which leaves rather uncertain the subspecific identity of the former, the span of both a large Lesser Snow Goose and a large Greater Snow Goose exceeding that of the Blue Goose. Breeding ground association would make the chances favor the white bird's identity as a Lesser, though the size comparison seemed to favor its identity as a Greater Snow Goose.

The birds were seen at about 7:30 A.M. The sky was clear although the distance visibility was rather poor, despite the strong north wind. The temperature had dropped noticeably from the rather mild level of the previous week.

This is the first definite record for the Blue Goose from Ocean County, N. J., known to the writer. Chas. A. Urner, who accompanied me, confirmed the identification.—GERBERT REBELL, Springfield, N. J.

Blue Goose (*Chen caerulescens*) in Cape May Co., N. J.—About the end of October 1934, a Blue Goose appeared on a pond on the property of Mr. Michael McPherson at Cold Spring, N. J., and joined a flock of Peking Ducks which he had on the farm. The Goose became more tame as time passed and came up to the barn with the Ducks, and to save it from possible killing by gunners when the shooting season began, Mr. McPherson caught it in a crab-net and placed it in a chicken coop.

The confinement or the food provided for it did not prove congenial and the bird was again liberated. It was still present at the end of January although it had been wing-clipped in the meantime. It was a bird of the year with a black head and bill and constitutes the first record, so far as I know, for the county.—WITMER STONE, *Academy of Natural Sciences, Philadelphia, Pa.*

Golden Eagle in Louisiana: A Correction and a Reaffirmation of a Positive Record.—When Mr. E. A. McIlhenny, in the October, 1933, 'Auk,' p. 431, took exception to a second-hand record of the Golden Eagle, that I had published in the previous issue of the same journal, p. 355, I immediately wrote to Mr. Alfred M. Bailey for the facts in the case, in order to publish any correction or explanation that might seem necessary. Unfortunately, more urgent affairs intervened, and my subsequent removal to Wisconsin and preoccupation with new duties drove the matter out of mind. It might well have remained so but for a note that Mr. John S. Campbell has published almost simultaneously in the June, 1934, 'Wilson Bulletin,' p. 116, and in the July, 1934, 'Auk,' p. 370.

It is patent that Mr. Campbell read both Mr. McIlhenny's note and my own too casually to observe that the particular record called in question is but one of several cited. The possibility that other readers may do the same thing leads me, even at this late date, to make an explanation.

In the first place, I want to apologize to my colleagues for lapsing into a fault which I have not hesitated to criticize in others, namely, the publication of unverified records. My only excuse is that they were given to me by an old friend in whom I had entire confidence—the late Edward Stiles Hopkins, of New Orleans. He was a good bird man, and he certainly knew the difference between the Bald and Golden Eagles as well as anyone in the state. The fact remains, however, that the two specimens in the Louisiana State Museum (which, by the way, is an institution entirely distinct from the one next to be mentioned) have been declared by Mr. Bailey, who collected them, to be actually immature Bald Eagles. Hopkins was a very sick man for many months before he died, and it must be that his illness affected his memory to some extent.

Be that as it may, the error in connection with those specimens in nowise invalidates the third paragraph of my note in the July, 1933, 'Auk.' The mounted bird in the Museum of the Louisiana Department of Conservation is still a Golden Eagle—provided, of course, that no one has singed the feathers off its legs since I last saw it! In view of Mr. McIlhenny's admission that it was he who edited the Conservation Department's 'Birds of Louisiana,' 1931, it seems even stranger that this specimen in the Department's own museum should have been ignored.—ERNREST G. HOLT, *Box 863, LaCrosse, Wisconsin.*

A Sparrow Hawk Gynandromorph.—A Desert Sparrow Hawk (*Falco sparverius phalaena*) in the University of Michigan Museum of Zoology is of interest in that it shows evidences of gynandromorphism. The bird in question, No. 62319, was taken at Grafton, North Dakota, on April 27, 1925, by H. V. Williams.

The feathers of the left side are male, as is one posterior left flank feather. The left half of the breast is colored as in a young male, and there are a few male feathers on the right side of the breast. Above the bird is partly male on the left wing; i. e., the proximal lesser, middle, and greater coverts have the ground color blue, some of the feathers being slightly tipped or spotted with cinnamomeous, and some of the longer secondaries are washed or spotted with bluish. There are a few male scapulars on the left side.

The under wing-coverts on both sides, remiges (except as noted above), tail, head, and remainder of body are normally female in appearance. The bird was sexed as a female and is of female size. The plumage is exceedingly worn for the season, and I do not find any trace of molt.

Although at least eighteen instances of gynandromorphism are on record for cage birds and domestic fowls, I am not aware of more than one published occurrence among wild birds.¹ There are, however, several cases of false hermaphroditism in wild birds, of the type in which complete male plumage is combined with female sex organs.—PIERCE BRODKORB, *Museum of Zoology, Ann Arbor, Mich.*

Albino Ring-Neck Pheasant.—On November 17, 1934, an albino, adult male, Ring-neck Pheasant (*Phasianus colchicus torquatus*) was shot in Logan County, Ohio, by Mr. Victor Snyder, of Jefferson, Ohio. He possesses the mounted specimen.

The eye color was pinkish. The feathers were white throughout. The bill and feet were light. The bird was equal in size to other Pheasants. The featherless tract upon each cheek was light red.—JOHN M. VASICEK, *10605 Lamontier Ave., Cleveland, Ohio.*

The Ruff (*Philomachus pugnax*) near Boston, Massachusetts, with Remarks on its Recognition in Winter Plumage.—On the afternoon of August 23, 1932, Mr. John H. Conkey, secretary of the Nuttall Club, and I proceeded to Squantum, where there were some flats and certain pools, which at high tide, were full of shore-birds. We found a marvellous gathering of no less than seventeen species. One great flock contained nearly all the larger species, and over an hour was devoted to the careful scrutiny of this flock. Finally one bird, a stranger, was picked out among the adjacent Greater and Lesser Yellow-legs and Willets. The body was just a tick shorter than that of the Greater Yellow-legs, the bill and legs noticeably shorter; in these respects, however, distinctly larger than the Lesser Yellow-legs. The general color was a sandy or pale brownish gray above, and appeared absolutely uniform at a distance, very different from the dark grey speckled with white of the Yellow-legs. In the uniform unmarked appearance, it resembled adjacent Willets, but the *sandy* shade was quite different from the stone or ash grey shade of the latter. At closer range it was apparent that the bird was not quite uniform above; the feathers of the back, scapulars and tertials were faintly but obviously margined with paler. The underparts were practically uniform white, with no markings on flanks and sides. Very striking were the *olive green* legs and the bill, *yellow for the basal half and black terminally*. At the time I supposed I was looking at a Ruff, and an examination of specimens later in the evening at the Museum of Comparative Zoölogy confirmed this opinion.

The observation was not reported at the time, as I was not previously acquainted with the Ruff in life, and as my field experience increases, I attach less and less importance to sight records of accidental visitants, including my own. I now, however, venture to report the bird on the following grounds (1) no less than 11 specimens have already been collected in New England, so that the occasional occurrence of the species is amply validated (2) I have just returned from a week-end on the coast of Norfolk, England, where Mr. B. W. Tucker of the University Museum at Oxford and I were, among other things, looking for early shore-birds. One of these was a female Ruff in winter plumage, and the moment I laid eyes on the bird, it was obvious that it was the exact duplicate of the bird I saw very much better and closer at Squantum. It remains only to add that other winter plumages of the Ruff have

¹C. H. Townsend, Bull. Nuttall Orn. Club, VII, no. 3, July, 1882, p. 181.

an additional and easily noticeable character in life, namely that the underparts are more or less buffy or even fawn color.—LUDLOW GRISCOM, *Museum of Comparative Zoology*.

The Ruff (*Philomachus pugnax*) in Barbados.—On October 12, 1934, a single shore-bird alighted on a pond on the west coast of Barbados and was promptly shot. As I was not acquainted with it I sent the wings, legs, etc. to Dr. Witmer Stone of the Academy of Natural Sciences for identification. He reports it to be a Ruff in winter plumage. While there are one or two previous records of the species for the Island the occurrence of this Old World bird so far from home is interesting.—

FRED P. PETERKIN, *Kendall St. John, Barbados, B. W. I.*

Avocet recorded for North Carolina.—A single Avocet (*Recurvirostra americana*) was observed on December 15, 1934, at Pea Island, Manteo, North Carolina. It alighted among a flock of Mallard decoys and fed in between them. The Mallards attacked the Avocet every time it came too close to one of them, but it took little notice of these assaults. After about ten minutes, it got up and flew a little way to a flock of Goose decoys; it fed in the shallow water near them for five or ten minutes until it was collected. The bird was very fat, although the bay was frozen over and it was feeding in ice holes. It is an adult female just completing its molt, with a few worn feathers in the scapular region. The specimen is now in the Leonard C. Sanford Collection under the number 16.382.

This is apparently the first definite record of this species in North Carolina. Pearson and Brimley (Birds of North Carolina, page 122) say: "A flock seen by Coues near Fort Macon, September 12, 1869, is our only record for North Carolina." In South Carolina the species has apparently been found only recently since Bachman's time (Wayne's Birds of South Carolina, page 43; Auk, 1930, page 577, and Auk, 1931, page 280). For Virginia see Auk 1925, page 580.—ERNST MAYR, *American Museum of Natural History, New York*.

Lesser Black-backed Gull (*Larus fuscus graellsii*) in Bronx County, New York City.—On December 9, 1934, while visiting a very favorable locality for Gulls, at the mouth of Westchester Creek in the east Bronx, we noticed a strange Gull resting on a mud-flat with several hundred Herring Gulls. It was in this area during the previous winter that white-winged Gulls occurred regularly in numbers.

At first glance, the bird appeared to be a Black-backed Gull but on closer observation, we realized that it was slightly smaller than the average Herring Gull, the back was a very deep slate gray, not black as in *L. marinus* and the legs and feet were a decided yellow color. The bird was fully adult as was evidenced by the color of the bill, a straw yellow with a conspicuous vermilion red mark about the terminal half of the lower mandible. When the Gulls took flight, our bird followed them to the nearby ash dump to feed upon the garbage and refuse. Incidentally, the Greater Black-backed Gull has never been observed on the dump; it apparently does not feed upon garbage as do Herring, Iceland and Glaucous Gulls.

We found, after a thorough examination of skins and literature at the American Museum that there are two species of Gulls which fit the description of our bird. The Lesser Black Gull of Europe (*Larus fuscus graellsii*) and the southern yellow-footed form of the Western Gull (*Larus occidentalis livens*). There is apparently no field mark by which these two birds can be distinguished.

However, as the Southern Yellow-footed Gull inhabits the Gulf of California, we feel that the time of year during which we saw our bird would exclude the possibility of this form. Furthermore, we are given to understand that land—in this case an

entire continent—is a more formidable barrier to birds than water or even oceans. The Little Gull, for instance, has turned up quite a few times around New York in recent years.

We, therefore, feel justified in calling this Gull *Larus fuscus graellsii*. We give it the name *graellsii*, for our bird had a deep slate-gray back rather than the slaty back of the northern or Scandinavian race of the European Lesser Black-back (*Larus fuscus fuscus*).—JOHN AND RICHARD KUERZI, *New York City*.

Iceland Gull (*Larus leucopterus*) in Rhode Island.—The writer first saw a bird of this species, in what appeared to be the second year plumage, on the Blackstone River above Lonsdale on January 9, 1934, seven miles from the headwaters of Narragansett Bay. The bird was with a small flock of Herring Gulls (*Larus argentatus smithsonianus*). Although the locality was visited often by myself and occasionally by others, the bird was not seen again until nearly three months later, when on April 4, I again found it with Herring Gulls. On this occasion, a very fine view of the bird was obtained as he walked back and forth on a log forcing the Herring Gulls off into the water. Just after sunrise on April 15, I again saw him on the river with Herring and the newly arrived Laughing Gulls (*Larus atricilla*). This was his last known visit to the locality.—ALFRED E. EYNON, *Lonsdale, R. I.*

"Kumlien's Gull" at Brigantine—A Correction.—After sending the note on the supposed occurrence of Kumlien's Gull on the New Jersey coast (Auk, 1934, p. 375) I sent the skull of the bird to Dr. Alexander Wetmore who declares it to be the Iceland Gull (*Larus leucopterus*) so I desire to cancel the record of *L. kumlieni* to which species from its larger measurements I supposed the specimen to belong.—W. STUART CRAMER, *216 Woodbine St., Harrisburg, Pa.*

The Type Specimen of Newton's Owl.—Newton's Owl, *Gymnasio nudipes newtoni* of St. Croix, Virgin Islands, was named by Lawrence¹ from a plate published by the Newtons in "The Ibis" for 1859.² The figure, by J. Wolf, shows an adult bird resting on a large limb with the head and forepart of the body of another individual, obviously immature, showing beyond. While Lawrence in his discussion of the St. Croix bird refers to "figures" it is obvious from his remarks that his considerations are based on the characters of the adult individual since the immature bird is so young as to be in juvenile plumage without the definite markings of the adult.

In June, 1934, during a visit to the Norwich Castle Museum in Norwich, England, to examine the famous Gurney collection I was able to study the specimens of this Owl collected by the Newtons, these being the first of this race taken on St. Croix that I have seen.

The material included four specimens, two being adults, one a male labelled as follows "No. 4488, *Strix nudipes*, Gt. Fountain. St. X, W. I. G. S. Ewing, 11. 5. 58. ♂" and the other marked "No. 4489 ♀ (?) Great Fountain, St. Croix, W. I. 1-2 June 1857, Jos. Robson." The other two are immature.

On study of the adult birds it was evident that the plate in question was based on the male (No. 4488) since the other adult specimen is distinctly paler and less distinctly marked below with less crossbarring on the sides. Further the feathers beneath the eyes are missing, evidently from decomposition before preparation as a skin. The differences in color and marking are such that they would inevitably have influenced the artist in his composition of the plate. It appears therefore that the male

¹ *Gymnoglaux Newtoni* Lawrence, Ann. Lyc. Nat. Hist. New York, vol. 7, May, 1860, p. 258.

² *Gymnoglaux nudipes* Ibis, 1859, pp. 64-66, plate.

is to be considered the type specimen of this race, though it has not been recognized as such previously.—ALEXANDER WETMORE, U. S. National Museum, Washington, D. C.

An Early Nesting Date for the Great Horned Owl.—The Great Horned Owl, (*Bubo virginianus virginianus*) has a questionable economic status, but in the Lower Rio Grande Valley of Texas more evidence of its destructiveness must be presented to offset its value as a destroyer of the innumerable rodents such as the rabbits, rats, mice, gophers, moles and ground squirrels.

On January 10, 1935, a Quail hunter brought to the writer a freshly killed female from several miles north of Edinburg, Texas. With it he brought two eggs (55 mm. x 45 mm. and 53 mm. x 46 mm.) on which the bird was sitting when shot. The skin was preserved. When the eggs were blown, the embryos were judged to be five or six days old, making the date of laying about January 4 to 5. This is probably one of the earliest nesting dates for the Valley.

A pellet about to be disgorged contained bones and hair of a rodent apparently *Microtus*. Numerous other Hawk and Owl pellets secured from various other sources indicate a predominant preference for rodents in this area.—STANLEY MULAIK, Edinburg, Texas.

Arkansas Kingbird in Massachusetts.—On Friday, November 16, 1934, Mr. J. D. Smith, preparator for the Boston Society of Natural History, shot an adult female Arkansas Kingbird (*Tyrannus verticalis*) at Westport, Massachusetts.

Apparently this is the first or possibly the second adult bird actually taken in Massachusetts, all the others being immature, but there have been numerous sight records of late. It was fat and in good condition and is now in the mounted collection of the Boston Society of Natural History.—CHANDLER ROBBINS, JR., Boston Post Road, Weston, Mass.

The Vermilion Flycatcher in Louisiana.—On December 22, 1934, I secured a specimen of the Vermilion Flycatcher (*Pyrocephalus rubinus*) at Avery Island, Louisiana. This is, I believe, the first actual capture of the species in the state, although I have seen it on one or two previous occasions when no means of capture were at hand.—E. A. McILHENNY, Avery Island, La.

Rufous Hummingbird (*Selasphorus rufus*) in Florida.—On November 29, 1934, I picked up in my yard a dead Hummingbird, which is now in the U. S. Biological Survey collection identified as the Rufous Hummingbird.

The bird was first seen by my mother on November 26, and I saw two on November 27. I realized that they were not the Ruby-throated Hummingbird, but as I had no collecting permit, no specimen was secured at the time. Although I saw only one bird after picking up the specimen, C. R. Mason of Sanford, Fla., reported that he saw two at my home on December 10. This bird was seen almost daily through December 13, feeding mainly on one Chinese Hibiscus (*Hibiscus rosa-sinensis*). Its departure was evidently due to the killing of its food plant by freezing temperatures.

The only other record for the eastern United States is a specimen in the Charleston Museum, taken in Charleston, South Carolina, on December 18, 1909 (Auk, vol. XLVI, p. 237).—ROBERT C. McCCLANAHAN, Pensacola, Florida.

The Yellow-Bellied Sapsucker and the Ruby-throated Hummingbird—Commensals?—In a previous note (Auk, L, p. 437) the writers reported the nesting of the Yellow-bellied Sapsucker (*Sphyrapicus v. varius*) in the Virginia Blue Ridge.

(Dr. Murray's name was inadvertently omitted in the signature of the previous note.) An incident of this observation seems to merit additional comment. We noted that a Ruby-throated Hummingbird (*Archilocus colubris*) followed the Sapsuckers closely from one new drilling to another, apparently for the sweet sap of the sugar maple and sweet birch. We watched this for about fifteen minutes. The relationship of these birds in this instance impressed us as a novel one. We would be glad to know of similar observations, if any.—RUSKIN S. FREER, *Lynchburg College, Lynchburg, Va.*, and DR. J. J. MURRAY, *Lexington, Va.*

Breeding of the Wood Pewee in Volusia County, Florida.—A. H. Howell in his 'Florida Bird Life' made no mention of the Wood Pewee (*Myiochanes virens*) breeding in east-central Florida. In a heavy stand of pines, near Samsula in Volusia County, I examined a Wood Pewee's nest. The nest held one egg on May 20, 1933, and three on May 25.

There were two or three other pairs of this species in the vicinity.

On May 16, 1931, I heard a Wood Pewee calling from an open cypress swamp in the pine timber three miles west of Fort Christmas, Orange County, Florida.

A Wood Pewee spent the 1933 breeding season fifteen miles north of Keenansville, Osceola County, Florida. Usually it sang from an open swamp of cypress, instead of dwelling in the pine land as is the custom in the northern part of the state.—J. C. HOWELL, *Rollins College Museum, Winter Park, Florida.*

Barn Swallows Breeding on the Gulf Coast.—Several days prior to the 4th of July, 1933, I was cruising with a party of friends along the Mississippi and Louisiana coasts. On Ship Island just off the coast, opposite Biloxi, Miss., while visiting an old fort built by the Confederates in 1862, for the protection of Ship Island Channel, I found a considerable colony of Barn Swallows (*Hirundo erythrogaster*) nesting. This massive fort structure is half in the water and half on land and is in a perfect state of preservation. The Swallow nests were built on the inside of the masonry under the arches. I counted sixty-eight nests, all of which appeared to have young birds pretty well grown. The nests were too high to look into, but I could easily see the young as the old birds fed them.

This is, I believe, the most southern record of the nesting of Barn Swallows.—E. A. McILHENNY, *Avery Island, La.*

Death of Juvenile Tree Swallow Due to Over-feeding.—Over-feeding on the part of birds is said to be prevented by a "nervous adjustment" of the throat muscles, which prevents swallowing when the bird has had sufficient food. It seems likely, however, that over-feeding may occasionally cause death, especially in the case of young birds. Thus F. C. Lincoln has recorded (Auk, 1926, p. 546) a case in which young Phoebes died in the nest after being "kept literally stuffed with moths" until late at night for several days. I can describe a case in which a juvenile Tree Swallow (*Iridoprocne bicolor*) died suddenly after helping itself to an astonishingly large meal of flies under somewhat unnatural conditions.

One summer morning a few years ago I picked up from a highway on our ranch a young Tree Swallow, not long out of the nest, that had sustained a broken wing. Taking it to the house, I left it to the care of the younger members of the household. Returning from the hay field at noon, I found the Swallow's keepers in despair. They had killed and fed to the bird every fly they could find about the house and nearby buildings, but the Swallow was as hungry as ever. So I carried it to the horse barn, where on the inside of the windows large numbers of flies, of several species, were gathered. Perched solidly upon my finger, the Swallow picked flies

from the glass until satisfied. Several times during that day and the next I let the hungry bird feed in this manner. Always it took the largest flies first, cleaning the window completely of one kind before taking any of a smaller size. (I continually moved the bird about to within reach of the prey it indicated as "next" by stretching toward it.) The number of insects eaten at a meal was surprisingly large.

On the third day there was an unusually large number of flies on the window, and I supposed that the horse-flies alone would make a full meal for the bird. But after picking off the ten or twelve large horse-flies, the Swallow cleaned the glass of a much greater number of blow-flies and house-flies, then continued to feed on the smaller kinds. Suddenly it began to fidget, then snuggled down into my hand; within three minutes it was dead.—WINTON WEYDEMAYER, *Fortine, Montana*.

Late Migration of Tree Swallows and Mourning Doves.—While the Tree Swallow (*Iridoprocne bicolor*) is a comparatively late migrant and straggling individuals or pairs occur as far north as New England in winter, the birds are usually gone before the latter part of October. On November 11, 1934, while investigating water-fowl conditions near the mouth of the Connecticut River, Connecticut, I was much surprised to find a flock of more than a hundred of these birds busily feeding over the marsh. On the same day a single individual was seen flying low over the town of Saybrook.

As another late migration date, it may be of interest to report that on November 12, 1933, near Savoy Pond, not far from Plymouth, Massachusetts, I observed at very close range a flock of sixteen Mourning Doves (*Zenaidura m. carolinensis*). These were feeding at a snow clearing near a spring in a heavy though fairly young growth of timber.—CLARENCE COTTAM, *U. S. Biol. Survey, Washington, D. C.*

The Raven in the Virginia Blue Ridge.—In eight or nine years of study of the birds of the Virginia Blue Ridge I have found but one Northern Raven (*Corvus corax principalis*) (cf. *The Raven*, IV, p. 11, July, 1933). Five additional records have been made this past year. On May 13, 1934, two Ravens were seen at close range directly overhead, far back in outlying ranges of the Blue Ridge, along the St. Mary's River in Augusta County. On September 22 one was recorded at the Peaks of Otter in Bedford County; on September 26 four birds were seen in two places in the Blue Ridge in Amherst County, at the Hog Camp and on Mt. Pleasant and on September 30, another bird was seen on Rocky Row Mountain in Amherst County. A mountaineer who lives at the foot of Rocky Row said that a pair of Ravens had been nesting on the mountain for years.

In addition, Mr. Maurice Sullivan, naturalist assistant in the Shenandoah National Park since July, 1934, told me in a recent conversation that he has frequently seen Ravens in the area since he began his work.—RUSKIN S. FREER, *Lynchburg College, Lynchburg, Va.*

Red Type of Crow Eggs.—After more than fifty years observing and collecting we have, at last, encountered this rare type of egg of the Eastern Crow (*Corvus b. brachyrhynchos*), the reddish tinge being far deeper than that shown in Bendire's work, or in any other illustrations that I have seen of this abnormal coloration.

On May first, 1934, my son-in-law, Minor Cole, shot a Crow as she left her nest. He decided to climb the easy fifteen feet to the nest in a willow and collect the eggs for me.

Incubation had evenly progressed in all the five eggs to about the fourth day. The eggs are rather sharply pointed ovate, of a type approaching elongate, rather than the usual true ovate or rounded ovate as found in the average Crow eggs.

Their sizes (in inches) are: 1.63 x 1.08, 1.68 x 1.12, 1.67 x 1.14, 1.67 x 1.11 and 1.73 x 1.14.

Throughout the whole set there is not the slightest suggestion of the usual greenish-drab shades. The shell, held to the light, appears a rich cream-white such as seen in eggs of the Eastern Sparrow Hawk, and on the whole, resembles in coloration eggs of the latter collected the same day. The smallest egg is less thickly marked and contains sparingly seated bold blotches of mauve and maroon-purple, which tints are brought out by brick-red laid over varying shades of lilac and lavender, the majority of them are on the smaller half of shell. It is a beautifully spotted egg with the brick-red, mauve and maroon-purple about equally apportioned and equaling the amount of lilac and lavender shades which are untouched by the reddish pigment. The ground color of the other four eggs, originally rich creamy-white, with lavender blendings in paler underlays, is heavily mottled over with brick-red, giving the shells a uniform rich vinaceous appearance, over which are diffused blotches of strong vinaceous-cinnamon blending into the underlays. Thus we have, in these five Crow eggs, specimens appearing like huge eggs of the Cactus Wren but the general red shade is really stronger than that of the Wren's eggs. They present, too, a strong resemblance to some eggs of American Woodcock and a suggestion, in coloration, of eggs of Merrill's Pauraque.—J. WARREN JACOBS, Waynesburg, Pa.

A Thrush (*Turdus iliacus*) with Three Legs.—Most of us, I imagine, who have done much tramping on marsh or mudflat, are familiar with the sight of little Sandpipers hopping about on one leg, the other having been shot away by some shore-shooter or punt-gunner. Years ago I saw such one-legged birds on the east coast of England but little did I think I should come across a bird with three legs albeit one a wooden one!

While cataloguing the collection of original drawings in the Emma Shearer Wood Library of McGill University, I came across a volume containing 29 original drawings by various artists—mostly of birds—one example of which was not only of exceptional merit, but of exceptional interest, the inscription being in very old Dutch. There was no mistaking, from the drawing and coloring (equal in every respect to the best examples of the present day), that it represented a Redwing (*Turdus iliacus*) although the inscription does not specifically say so.

This inscription, written in a very small hand, in 17th Century Dutch, was enlarged by photography and translated by Prof. W. L. Graff of McGill University, as follows:—Rocho van Veen, 1681. "A Thrush with a wooden peg, of the color of a cane (bamboo), tightly grown into the body at the front leg, as may be seen from the peg, which lies near by with a piece of flesh grown around it." On consulting the 'Dictionnaire des Peintres,' vol. 3, 1924, by E. Benezit, I found that the artist Rocho von Veen was known as a painter of birds, who died in 1706 and who in 1668 was a student of J. Wiz de Wette at Harlem. As indicated by the drawing, the peg, twig, or whatever the substance may have been, had evidently at some time or another pierced the breast of the bird when alighting, subsequently becoming firmly attached thereto, and being about the same length as the other two legs, it suggested a more or less suitable title for the present note. The only other instance of a somewhat similar nature that I know of, is that of a Woodcock obtained near Bangor, Maine, on October 9, 1880, which had a piece of golden-rod stem about five inches long embedded across its breast, and which I have referred to elsewhere, together with a reproduction of the drawing made at the time the bird was shot and mounted (Canadian Field Naturalist, 49, pp. 1-28, 1935).—HENRY MOUSLEY, 4073 Tupper Street, Montreal, Canada.

Bicknell's Thrush in New Jersey.—As a supplement to Mr. Charles H. Rogers' note (Auk, XLV, 1928, p. 225) on *Hylocichla minima minima* in New Jersey, I may say that there are in the University of Michigan Museum of Zoology the following two skins of this subspecies, both taken at South Orange, Essex County, New Jersey, by W. E. D. Scott: No. 75228, ♀, October 2, 1896; wing, 89 mm. No. 75229, ♀, October 3, 1896; wing, 95 mm.—PIERCE BRODKORB, *Museum of Zoology, Ann Arbor, Mich.*

Willow Thrush in New Jersey.—On the morning of September 10, 1934, a Thrush was found on the Campus of Princeton University, the circumstances indicating that it had killed itself by striking a building within a few hours previously. It was a female, with unossified skull and still wearing a few feathers of its juvenal plumage. Besides comparing it with its relatives in this Museum, I have compared it at the Field Museum (with Dr. Oberholser) and at the American Museum (with Mr. Zimmer and Mr. J. T. Nichols) with specimens, of the same sex, age, and season, of Bicknell's Thrush and of both Veeries, and we all agree in identifying it as *Hylocichla fuscescens salicicola*, the Willow Thrush, or, more properly, the Willow Veery. I know of no previous record for New Jersey of this subspecies. This specimen is a very small one; wing, 89 mm., just the minimum for *salicicola* and more than half a centimeter under the minimum for *H. f. fuscescens* (*fide* Ridgway, Birds N. & Mid. Amer., IV, pp. 65 and 68).—CHARLES H. ROGERS, *Princeton Museum of Zoölogy, Princeton, N. J.*

Mockingbird at Nantucket, Mass.—In the January number of 'The Auk' there is a note on the occurrence in summer of the Mockingbird (*Mimus p. polyglottos*) at Woods Hole, Mass. In my own records I find that I saw this species during two widely separated visits to the neighboring island of Nantucket. The first record is for September 1913 and the second for September 1927. Strangely enough the two birds were seen at the same place—near the beach, at the western end of Siasconset village. In 'A Preliminary List of the Birds of Nantucket' (published by the Nantucket Maria Mitchell Association) the author, W. Sprague Brooks, says: "There are several records of this bird on Nantucket, and it appears that a pair bred in 1911 (T. S. Bradlee, Auk, Vol. 29, p. 249). Pair found breeding June, 1928, by Miss Ethel Capen and Mr. F. Capen; verified by Mr. G. H. Mackay."—MARGARET H. MITCHELL.

Starling (*Sturnus vulgaris*) in Benton County, Arkansas.—On the morning of January 10, 1934, I saw eight Starlings near my house on ground recently burned over. That was the first time I had noted this species in this region. On the 26th of the same month I saw three individuals in an oak grove nearby. They stayed there for several days. I saw none here during the summer of 1934 nor could I find any trace of a nest in the vicinity. On Christmas day, 1934, I saw two individuals in a small patch of oak timber some four miles south of Rogers, Arkansas.—D. E. MERRILL, *Rogers, Arkansas.*

The Orange-crowned Warbler in the New York City Region.—Of all the Warblers which occur in the New York City Region the Orange-crowned (*Vermivora celata celata*) is certainly among the rarest and many keen and active field-men in this region have yet to see this species in life. While this bird must be regarded as a rare migrant it is one of the few Warblers which one may expect to meet with in the New England and Middle Atlantic states during the winter months. (cf. Horace W. Wright, Auk, 1917, pp. 11-27.)

It has been my good fortune, to twice meet with the Orange-crowned Warbler during the month of January within thirty miles of New York City. On January 20, 1926, while meandering along the eastern shore of the Hudson River at Inwood Park, New York City, I noticed a small Warbler flitting about the low shrubs of a garden. Careful study of this bird through 10 power binoculars left no doubt as to its identity. This individual appeared to be in perfect condition despite the cold boreal blasts which came across the Hudson and was in characteristic manner restlessly flitting about.

My second winter meeting with this species came on the dull cold day of January 6, 1935, at Old Greenwich, Connecticut. Miss Helen B. Gere, Mr. and Mrs. Murdock and the writer had just finished combing a hemlock grove for a Barred Owl (*Strix varia varia*) which had been observed the week before, when we heard a sweet song. It was on the style of a Chipping Sparrow's chant but had a much sweeter more musical quality. None of us had any idea as to the identity of the songster but a few minutes search brought us face to face with a typical fall-plumaged Orange-crowned Warbler. It was soon joined by two others of the same species and we carefully studied the trio for the next half hour. The birds seemed to prefer the low shrubbery along the marshy edges of a stream and not until disturbed did they take to a small group of white pines on a nearby ridge. Two of these birds were in the typical dull autumn plumage but the third was much more sulphur below and had a gray wash to the head. We can only suspect that the song first heard was given by one of these birds but for the length of our observations we heard only the characteristic call note which is a sharp "chip."—ALLAN D. CRUICKSHANK, *New York City*.

Orange-crowned Warbler (*Vermivora celata celata*) in Maine.—The following notes on the Orange-crowned Warbler may be of interest in view of the fact that this species is uncommon in Maine.

On October 12 and 13, the state was subjected to a severe and unseasonable north-east storm, alternating, in the vicinity of Bangor, between snow and rain. The temperature for the two days ranged between 30 and 40 degrees, and the velocity of the wind on the 13th was about twenty miles an hour. About nine o'clock in the evening of this date, an exhausted and dazed Orange-crowned Warbler fluttered through the door of a department store in the heart of Bangor's business district. It was given to my wife who brought it home in a small cage of the type used in transporting Canaries.

The bird exhibited no fear at all, and permitted me to handle it as much as I pleased, as well as to make a few measurements. There was no question as to the species, and the bird was, I believe, a female of the year. No trace of a crown patch was visible, even by closely examining the feathers, and while this condition is sometimes found in adult females as well as young males, the general plumage indicated a young female. The bill measured .45 in. and the tarsus .65 in.

On the morning of the 14th, the bird made known a very keen desire to leave its close quarters so I removed it to a Canary cage after first taking out the Canary. I placed a twig from an apple tree in the cage and the Warbler quickly gleaned the leaves for insects. It appeared perfectly at home in the cage and made no effort to get out after the first few minutes of exploration.

Desiring to experiment a bit, I put the Canary in the cage with the Warbler. For about fifteen minutes the birds showed no particular interest in each other, even when the Warbler alighted on the Canary's head for a second. However, when the Warbler perched on the food dish, the Canary showed pugilistic tendencies, and it

was decided to remove it. I kept the Warbler in the cage for the rest of the day, much to the disgust of the Canary, who was forced to occupy the smaller quarters.

The bird was very hungry and I procured an assortment of insects from a nearby field. It readily took this food from my fingers or from forceps. In spite of its hunger, however, it was extremely particular as to the type of food which it ate. It snapped at a garden snail but refused to eat it. The same thing proved true in the case of sow bugs and ground beetles. It readily accepted grasshoppers, flies and crickets, and in the evening ate a little bread which had been soaked in milk.

The most interesting feature about the actions of the bird was its behavior with large grasshoppers or crickets. Holding the insect firmly in the bill, the Warbler repeatedly beat it against the floor of the cage. The movement of the head while this performance went on was so rapid that my eyes could scarcely follow it. Whether such procedure is intended to kill insects that are too large to swallow or whether it is intended to break them into smaller pieces, I could not say. It may be a common act among Warblers, but I have never observed it in nature nor have I read anything concerning it.

The only note made by the bird was a very sharp, rather high-pitched "chip," uttered occasionally when it was in the smaller cage.

On the morning of the 15th a small flock of White-throated Sparrows, White-crowned Sparrows, and Myrtle Warblers was in the garden, so, against my ornithological desire to keep the Orange-crowned Warbler as a specimen, we liberated it. At first it seemed reluctant to go, remaining on the edge of the cage for several minutes, but upon hearing the notes of the other birds, it flew to the top of an apple tree and immediately commenced feeding among the leaves.—HOWARD L. MENDALL,
Department of Zoology, University of Maine, Orono, Maine.

On the Color of the Iris in the Western Cuban Grackle.—When collecting in Cuba in 1900 with William Palmer, we found the Grackle (*Holoquiscalus jamaicensis caribaeus*) not uncommon in Pinar del Rio Province and during March and April the birds were all in adult plumage and with yellow irides. In the latter part of June we visited the Isle of Pines and one of the first Grackles shot, though in apparently adult plumage, had the irides brown. It was recorded on the label as hazel as we then thought the specimen was a new form. Later we saw adults with yellow irides and immature birds with brown irides, and reached the conclusion that all immature birds had the irides brown and that they assumed the adult plumage before the color of the eyes changed. This may explain some of the divergent views on the color of the eyes in the Boat-tailed Grackle and related forms that have been appearing in the literature in recent years. Unfortunately, Ridgway (U. S. Nat. Mus. Bull. 50, pt. 2, 1902, p. 226) used the note on the color of the eye on the Isle of Pines' specimen in stating the color of the iris of the Cuban Grackle as hazel. My understanding of hazel at that time was not the hazel of Ridgway's 'Nomenclature of Colors,' but more of a raw umber. The color of the eye of the Cuban Grackle as given by Ridgway is erroneous for the form and should have been corrected long ago.—J. H. RILEY,
U. S. National Museum.

The Red Crossbill in Kansas:—A Correction.—In the October, 1932, issue of the Auk (Vol. XLIX, p. 489) I reported the presence of the Red Crossbill (*Loxia curvirostra pusilla*) at Lawrence, Kansas. The identification was based on specimens then in the University of Kansas Museum of Birds and Mammals. Since then W. S. Long, of this museum, and myself have had occasion to re-examine these and other Crossbills in the collection. It is evident from this examination that the original

identification was an error and that the birds collected were Bendire's Crossbill (*Loxia curvirostra bendirei*).—J. D. BLACK, Museum of Birds and Mammals, University of Kansas, Lawrence, Kansas.

Late Nesting of the Indigo Bunting (*Passerina cyanea*).—On the afternoon of August 18, 1934, a nest of this species was found by me at Pomfret, Connecticut, near the Hampton line. It was situated about three feet from the ground in a clump of blackberry bushes bordering a section of small mixed woods, some 725 feet above sea level. The nest contained three naked young. The male bird was not present at the time, but rather fleeting glimpses of the female were obtained as she nervously moved about the foliage of some nearby birches, giving the characteristic alarm note.

On August 22 the young were marked with bands numbered c189824-26 by Mrs. K. B. Wetherbee of Worcester and Pomfret. They were still in the downy state, brownish in color, but feathers had begun to appear along the flanks. At this time both parent birds were observed.

It seems that this observation might be of some interest as a Connecticut record, since in his 'Birds of Massachusetts and Other New England States' the late E. H. Forbush mentions August 14 as his latest date for fresh eggs of this species in Massachusetts, and lists the nesting period as taking place somewhat earlier in Connecticut.—LLOYD S. JENKINS, 10 Ashmore Road, Worcester, Mass.

Another Ipswich Sparrow from Georgia.—In 'The Auk,' for April, 1932, p. 238, Mr. Alexander Sprunt, Jr., recorded an Ipswich Sparrow (*Passerculus princeps*) collected on Oysterbed Island, Ga., and mentioned the other records of the species from this state.

Several times every winter since Mr. Sprunt and I found that first specimen, I have carefully searched for others, but without success until this winter, when one was seen on December 30, 1934, and the same one or another in the same locality on January 13, 1935. Both times the pale bird was in a loose company of Savannah Sparrows on the extreme eastern end of the island. Both times it was seen with sufficient clearness to distinguish without binoculars, though I was using 10 x glasses.—IVAN R. TOMKINS, U. S. Dredge "Morgan," Savannah, Ga.

The Pine-woods Sparrow a Breeding Bird in South Carolina.—In view of the fact that the Fourth Edition of the A. O. U. 'Check-List' limits the range of the Pinewoods Sparrow (*Aimophila aestivalis aestivalis*) to Florida and southeastern Georgia, it is of interest at this time to record the occurrence of this subspecies during the summer months in the extreme southern edge of South Carolina. In the course of field work carried on late in July between Allendale and Ridgeland the writer found *Aimophila aestivalis* fairly plentiful in the scattered stretches of pine woods. Two birds, both adult males, were collected July 25, 1934, one at Allendale, in Allendale County, and the other at Gillisonville, in Jasper County. These were compared with specimens of both *aestivalis* and *bachmani* in the Biological Survey collection and found to be clearly referable to the former. As the breeding birds at Charleston are typical *bachmani*, the limited distribution of *aestivalis* in this southern corner of the state apparently marks its extreme northern range on the Atlantic coast.—THOS. D. BURLEIGH, Bureau of Biological Survey, Washington, D. C.

Nesting of the Lark Sparrow in Central Tennessee.—The Eastern Lark Sparrow (*Chondestes grammacus grammacus*) has long been known as a rare summer resident in central Tennessee. Mr. A. F. Ganier has summarized early occurrence and nesting data (*The Migrant*, 3: 37 and 4: 22).

In the summer of 1934, in the little-worked cedar glade country of Rutherford County, where the bird had not previously been known to occur, the writer collected data that seem to indicate the species to be locally not uncommon. On May 13 the first record was made, a single male. It flushed from the edge of a broad dry field very suitable for nesting. This site was not revisited until June 10, when both birds of the pair were discovered. Their evident agitation at being approached prompted further search, and a young bird just out of the nest was finally found. The writer, with Prof. George Davis, returned to the locality on June 17. The birds were still in the area, and three young, well able to fly, were with the parents.

On this same date, in a field half a mile away, we discovered another pair and succeeded in finding one young bird unable to fly. From the actions of the parents there were other young nearby.

In a field about a mile from either of the aforementioned pairs, the writer, on May 28, had seen a single female. Subsequent searches here failed to locate any birds.

The young of the first pair mentioned were seen for the last time on July 14, in a field about half a mile south of the nesting field.

Mr. H. O. Todd, Jr., a Murfreesboro bird student, was able to contribute some interesting records of Lark Sparrows at his home farm, near the location of the last mentioned field. A pair of the birds nested for some years in his strawberry patch. He has an egg taken from the first nest found, "about May 20, 1927." This nest contained four eggs. Three weeks later, about a hundred yards from the first, Mr. Todd found another nest containing five eggs. A nest was found each year thereafter until 1933. The birds, however, were present during this summer, and presumably bred.

Tennessee's first records of the species were made by Rhoads (Proc. Acad. Nat. Sci. Phila. 1895, p. 489), who collected specimens in Obion and Davidson Counties. These specimens are in the Academy's collection.—COMPTON CROOK, *Dept., of Biology, Boone Training School, Boone, North Carolina.*

Notes from Memramcook, Westmorland County, New Brunswick.—*Circus hudsonius*. MARSH HAWK.—A nest with three eggs was found on May 12, 1932, on the salt hay marshes of the Memramcook River. This would appear to be an early nesting date for this region.

Philohela minor. AMERICAN WOODCOCK.—A bird was observed on November 13, 1932. This is as late as the latest date of fall departure from New Brunswick, given by Bent (*Life Histories, North American Shore Birds*, pt. 1, p. 77). Two individuals were also seen on November 1, and one each November 3 and 6, of the same year.

Limnodromus griseus. DOWITCHER.—One bird was found on July 20, 1932, feeding with Wilson's Snipe on the shore of a small, marshy lake. Sight of the long bill, and of the white patch on lower back and rump, aided in identification.

Quiscalus quiscula aenus. BRONZED GRACKLE.—A late individual was watched within short range on December 20, 1930.

Hesperiphona vespertina vespertina. EASTERN EVENING GROSBEAK.—A flock of six birds came on January 14, 1930, to feed on the winged seeds still hanging on a group of Manitoba maple trees near our house. On December 10, 1931, three birds visited the same trees to feed on the seeds. One of these, a female, was shot. The distinctive, black, yellow and white livery and the large, conical, light-colored bills of the birds aided in field identification.

Melospiza melodia melodia. EASTERN SONG SPARROW.—A late bird was seen on December 6, 1931.

Calcarius lapponicus lapponicus. LAPLAND LONGSPUR.—A flock of six birds was

observed on October 30, 1933, on the salt hay marshes of the Memramcook River. Two specimens were collected.—REID McMANUS, Jr., *Memramcook, New Brunswick, Canada.*

Mid-summer Bird Notes from Long Point, Norfolk County, Ontario.—During the month of July 1933, the writer made two separate visits to the breeding colonies of Piping Plovers and Common Terns, along the south beach of Long Point in Norfolk County. The first, on July 6, in company with Mr. A. M. Crooker of the Toronto University, and the second on July 20, with Dr. W. E. Hurlburt of Vineland, Ontario.

In our progress along the beach, on the occasion of the first visit, July 6, we walked through a moderate sized breeding colony of from 75 to 100 pairs of Common Terns (*Sterna h. hirundo*). The nests, scooped out depressions in the sand, were placed a short distance above high water mark. Eggs were plentiful at the time of our visit; but downy young, in various stages of growth, were also present in some numbers, and in a few instances well advanced in size, and running far from the nests.

Farther east along the beach, two small colonies of Piping Plovers (*Charadrius melanotos*) were met with, but no eggs were found and only two or three downy young were seen; whereas last year (1932), at this time, downy young were present in the breeding colonies in considerable numbers. Either the Piping Plover had bred earlier this year (1933), and the majority of the young were fully fledged and on the wing, or storms and exceptionally high water, of which there was recent evidence, had destroyed many of the eggs and young. The latter supposition was given some support by the fact that unbroken eggs of the Common Tern were found in the flotsam and jetsam left half way up the beach, indicating that the unusually high water had also taken its toll from the Tern colony.

About one mile farther east along the beach, the following non-breeding, or supposedly non-breeding, birds were noted, some of which would appear to constitute somewhat interesting mid-summer records:—Least Sandpiper (*Pisobia minutilla*) 5; Semipalmated Sandpiper (*Ereunetes pusillus*) 1, with an injured leg; Red-backed Sandpiper (*Pelidna alpina sakhalina*) 1, in breeding plumage, but with an injured wing and apparently incapable of sustained flight; Caspian Terns (*Hydroprogne caspia imperator*) 3. Also large numbers of Herring Gulls (*Larus argentatus smithsonianus*), Ring-billed Gulls (*Larus delawarensis*), and a considerable aggregation of non-breeding Common Terns, or individuals which had possibly completed nesting operations for the season.

On the occasion of the second visit, July 20, the Tern colony was again examined, and young birds in all stages of growth were seen. A few were still in the nest depressions, but most of them were running, or squatting, here and there over the beach. During the inspection of the Tern colony, about 100 or more adults were continuously circling overhead.

A short distance from the Tern colony, about 50 Piping Plovers were observed, in small scattered parties; but no downy young were seen at this time. While watching the Piping Plovers, one unusual appearing bird, apparently adult, was observed closely, and found to entirely lack any trace of a black neck band.

Among other birds encountered at Long Point on July 20, were Least Sandpipers (*Pisobia minutilla*) 7; Semipalmated Sandpipers (*Ereunetes pusillus*) 4; Lesser Yellow-legs (*Totanus flavipes*) 7; Pectoral Sandpipers (*Pisobia melanotos*) 2; several Killdeer (*Oxyechus v. vociferus*), and large numbers of Herring and Ring-billed Gulls, in addition to many more Common Terns, including a number of young of the year, apparently, judging by their somewhat uncertain flight, just recently on the wing.

The various Sandpipers, and the Yellow-legs, would appear to be very early for returns from the north, and we are somewhat inclined to believe that at least some of these birds were non-breeding left-overs from the spring migration.—R. W. SHEPPARD, Niagara Falls, Ontario, Canada.

Notes from Essex County, N. Y.—*Ixobrychus e. exilis*. LEAST BITTERN.—Two males and a female July 10, 1932, in a suitable marsh near Ticonderoga.

Gallinula chloropus cachinnans. FLORIDA GALLINULE.—Six pairs estimated July 10, 1932, near Ticonderoga.

Tringa s. solitaria. SOLITARY SANDPIPER.—From July 10, 1933 to September 28, 1932.

Stelgidopteryx ruficollis serripennis. ROUGH-WINGED SWALLOW.—One July 10, 1932, near Ticonderoga. I was previously familiar with the species, and the bird perched a few feet away, facing me; the upperparts, throat and breast were an even, plain brown. To check up I examined specimens of the young of the other Swallows and eliminated each.

Perisoreus c. canadensis. CANADA JAY.—One October 8, 1931, near Middle Saranac Lake; probably a winter visitant. This record in Franklin County.

Vireo philadelphicus. PHILADELPHIA VIREO.—On July 7, 1932, while searching territory near, and similar to, that in which Aretas A. Saunders (Roosevelt Wild Life Bulletin, Vol. 5, No. 3, p. 402) found a Philadelphia Vireo on July 12, 1926, I found Red-eyed Vireos well distributed. I also found a singing male Philadelphia Vireo: the crown and transocular stripe were gray, the superciliary whitish; the entire underparts were light, citron yellow; and the bird was smaller than a Red-eye. A similar bird, apparently its mate, engaged in chases with it while I watched them for a long time. A quarter of a mile away I saw a bird that was probably a Philadelphia. The birds were in second growth about 20 or 25 feet high, mainly maple, poplar and cherry, mixed with open brambly patches—land once burnt over. I saw a singing male Philadelphia Vireo in the same place July 6, 1933, but in both years long searches failed to reveal a nest. The song was not distinguishable from that of the Red-eye.

Vermivora peregrina. TENNESSEE WARBLER.—A male was observed, which was singing morning and afternoon, in second growth at 2000 feet on Mt. Hurricane on July 10, 1930 (Laidlaw Williams and G. Carleton). At Elizabethtown I have observed it as a transient regularly until late September, the latest date September 29, 1932. The Blackburnian and Bay-breasted Warblers are seen regularly until the end of September, and the Chestnut-sided has been seen late in the month, as well as many other Warblers.

Dendroica palmarum hypochrysea. YELLOW PALM WARBLER.—One seen perfectly October 14, 1932 near Elizabethtown; the entire underparts were deep yellow and it was certainly this subspecies, which is apparently very rare in western, central and northern New York State.—GEOFFREY CARLETON, 45 Wall St., New York City.

Notes from Central Pennsylvania.—On December 2, three Lapland Longspurs (*Calcarius lapponicus lapponicus*) were observed by the writer with a flock of Northern Horned Larks (*Otocoris alpestris alpestris*) on the College farms at State College. Dr. Haskell Curry reports having seen six of the Longspurs about a week previous. On December 8 a flock of birds in the same locality containing about thirty Longspurs and 125 of the Larks in addition to three Snow Buntings (*Plectrophenax nivalis nivalis*). William Meyer reports having seen the Snow Bunting for the first time on December 3. The throat and head markings were light enough in color, being almost white, to have caused us to call them *O. alpestris praticola*.

On December 7 at Harrisburg on the Susquehanna River a rather large flock of Ducks was resting. In the flock were 5 Horned Grebes (*Colymbus auritus*), 30 Canada Geese (*Branta canadensis canadensis*), 8 Mallards (*Anas platyrhynchos*), 100 Black Ducks (probably *A. rubripes tristis*), 4 Baldpates (*Mareca americana*), 8 Pintails (*Dafila acuta tzitzioha*), a male Ring-necked Duck (*Nycoeca collaris*), 2 Canvas-backs (*Nyroca valisineria*), 6 Lesser Scaups (*Nyroca affinis*), 12 Golden-eyes (*Glaucionetta clangula americana*), 6 Old-Squaws (*Clangula hyemalis*), 4 Ruddy Ducks (*Erisomatura jamaicensis rubida*), 2 Hooded Mergansers (*Lophodytes cucullatus*), 8 American Mergansers (*Mergus merganser americanus*), and 5 Red-breasted Mergansers (*Mergus serrator*). Miss K. M. Stokes and William Meyer accompanied me on the former occasion and W. Stuart Cramer on the latter.—RICHARD M. MAY, *Dept. Forests and Waters, Harrisburg, Pa.*

Some Additional Notes on the Birds of Pinellas County, Fla.—During April, 1934, I spent about two weeks in Pinellas County, Florida, making my headquarters at Indian Rocks, a small island separated by a narrow channel from the mainland.

During the time that I was there I observed 23 species of birds which were not noted during my visit to Pinellas County in 1918 (Auk, Vol. XXXVI, p. 393–405). In 1918 there was a large colony of birds on Big Bird Key on lower Tampa Bay. This island has been deserted in favor of a much smaller one called Little Bird Key. The White Ibis (*Guara alba*), which I found abundant, as did Bent and Copeland as well as DuMont, was entirely absent from the colony when I visited it on April 14. The Man-o'-War bird (*Fregata magnificens*), which I found in only very small numbers on my previous visit, was constantly present during the time that I was there in 1934. On April 14 there were more than 125 of these birds on Little Bird Key.

Regarding the Florida Jay (*Aphelocoma caerulescens*) Bent and Copeland say they found it only on "black jack ridges," while DuMont speaks of seeing a pair on Indian Rocks. I found the species distributed in pairs along about four miles of Indian Rock Key.

Some additional notes on eight other species follow:

Moris bassana. GANNET.—On April 9 I saw 14 Gannets in various plumages pass Indian Rocks Key flying south over the Gulf of Mexico. The species was not observed again during my stay. Howell mentions this species as rare on the Gulf Coast.

Totanus melanoleucus. GREATER YELLOW-LEGS.—One was seen on a mud flat at Madiera Beach April 9 and another at Indian Rocks Key April 19.

Coccyzus minor maynardi. MAYNARD'S CUCKOO.—Seen and heard in a hammock at Spanish Farm, near Indian Rocks, April 15 and 18.

Myiochanes virens. EASTERN WOOD PEWEE.—In a live oak grove back of Indian Rocks post office April 22.

Sturnus vulgaris vulgaris. EUROPEAN STARLING.—I regret to report individual Starlings seen April 9 and 13 near Seminole.

Vireo olivaceus. RED-EYED VIREO.—Seen and heard at Spanish Farm, Indian Rocks, April 22.

Oporornis formosus. KENTUCKY WARBLER.—On April 13 I had excellent short range view of a Kentucky Warbler walking on the ground in palmetto scrub under live oaks at Indian Rocks.

Icterus galbula. BALTIMORE ORIOLE.—One male bird in full song was present near Spanish Farm April 15.—CLIFFORD H. PANGBURN, *Highland Park, Illinois*.

Notes on Some Bird Colonies on the Gulf Coast.—During April and May

1934, in the course of inspecting sanctuaries and bird colonies along the Gulf Coast for the National Association of Audubon Societies, the writer had the opportunity of making a series of observations that may be helpful in considering the present status of certain species that have long been of particular interest to bird protectionists. The territory covered in this field work included isolated portions of Florida and Louisiana, and the Texas Coast from Galveston Bay to the Three Islands, in lower Laguna Madre. The status of each of the species considered is either doubtful or has undergone considerable change in recent years.

Pelecanus erythrorhynchos. WHITE PELICAN.—The White Pelican has been recorded as nesting irregularly in Laguna Madre, off the coast of southeastern Texas (Auk, XXXVIII, 1921, 515; Condor, XXXII, 1930, 202-204, 304). The unusual character of this nesting may be gathered from the fact that at one season 15 or 20 nests would be observed, as many as 2500 nests the following year, and the next year none at all. In 1934 no birds of this species were discovered nesting on the Texas Coast, and only 90 individuals were counted during 18 field days along the coast. These were observed as follows: Green Island, Laguna Madre (May 6-15), 78; Vingt'un Island, Galveston Bay (May 19), 12.

Apparently the White Pelican is not persecuted in coastal Texas as is the Brown Pelican, and it is the belief of the writer that the present decrease and constant irregularity in numbers are due to the erratic nature of the White Pelican's nesting activities in this state, and not to unfavorable conditions or circumstances. However, it is possible that unfavorable conditions elsewhere may be a factor in the unusual records for this species in Texas.

Pelecanus occidentalis occidentalis. BROWN PELICAN.—The total number of Brown Pelicans on the Texas Coast in 1934 was estimated by the writer and J. J. Carroll, of Houston, as 900. This number was divided among three colonies, as follows: Bird Island (West Bay), 400; Third Chain-of-Islands, 300; Sunflower Island, 200. In 1918 Dr. T. Gilbert Pearson estimated the Brown Pelicans on the Texas Coast not to exceed 5000. Thus, in 16 years, there has been a decrease of about 82 per cent, due to the regrettable fact that this bird is still on the unprotected list in Texas, in spite of well considered proof of its economic innocence (See: Am. Review of Reviews, May 1919, 509-511), and the continued efforts of the Audubon Association for its full legal protection.

Last May the writer was witness to a grimly silent tableau that may be taken as a dismal sample of the destruction of these harmless birds by misinformed Texas fishermen. On a small shel island close to the ship channel, among the Third Chain-of-Islands, we discovered one hundred deserted nests, a heap of smashed eggs, the bodies of three adult Pelicans, stretched in grotesque postures, and, nearby, a wooden handle from the type of pump used commonly in small fishing boats, its surface smeared with the contents of several hundred Pelican eggs.

Fortunately, in Florida and Louisiana, the Brown Pelican is increasing under protective laws, with the added advantage of warden service at strategic points.

Casmerodius albus egretta. AMERICAN EGRET.—The season of 1934 may well be the highwater mark for this species since efforts to save it from extermination first began. There were 19 known rookeries of the American Egret reported to the Audubon Association during the year, 11 of these having been visited by the writer. A conservative estimate of the number of Egrets in these 19 rookeries is placed at 16,500 individuals. In Texas the American Egret nested last season by the hundreds in localities where a modest half dozen was cause for rejoicing only a few years ago. The recent New Jersey breeding record (Auk, LI, 1934, 368-369) and the increasing

number of American Egrets observed in post-nuptial flights are significant of this remarkable come back.

Egretta thula thula. SNOWY EGRET.—The Snowy Egret shared with the larger Egret a banner season. Thirteen rookeries of this species were visited by the writer last spring along the Gulf Coast. The total number of known rookeries, on record in 1934, is 22, and the total population of these rookeries has been conservatively estimated by the writer and others as 72,500 individuals. This is by no means an accurate total, as many southern rookeries are unknown or not reported.

Data on the rookeries of *Egretta thula brewsteri*, in the West, are not available at this time.

Dichromonassa rufescens rufescens. REDDISH EGRET.—This species, in many ways the most interesting of all the *Ardeidae*, is now nesting in the United States as far east as Bird Island, in West Bay, off the western tip of Galveston Island, Texas. Three large rookeries are located on the Texas Coast, at Green Island, Laguna Madre; Dunham Island, Aransas Bay; and the Second Chain-of-Islands, San Antonio Bay. Small colonies of nesting birds are established on Big Bird Island, Laguna Madre, and on Bird Island in West Bay.

A conservative estimate of the number of adults in these rookeries, all of which were visited by the writer, would be between ten and twelve thousand individuals. There is little doubt but that other rookeries of Reddish Egrets, as yet undiscovered, exist along favorable sections of the Texas Coast south of West Bay.

Plegadis falcinellus falcinellus. EASTERN GLOSSY IBIS.—The Eastern Glossy Ibis apparently has never been a well-established breeding species in the United States. There have been obscure or casual nesting records from Louisiana, and its breeding status in Florida, while not without authenticity, is little better than casual.

As the Glossy Ibis is a bird of the fresh water marshes and inland lakes, I was surprised to find 21 of this species inhabiting the vast mixed rookery at the headwaters of the Shark River, in southwest Florida. These birds were not nesting at the time of my observations (Apr. 10-15), but showed every indication of preparing to do so. However, the wardens reported five nests of the "Bronze Ibis" on April 26.

A few pairs are again nesting in the Audubon Association's sanctuary at Orange Lake, in northern Florida.—ROBERT P. ALLEN, *Nat. Asso. Audubon Societies*.

Notes from Berrien County, Michigan.—*Anser albifrons albifrons*. WHITE-FRONTED GOOSE.—One was seen on the beach of Lake Michigan at Union Pier on November 3, 1933. It was standing apart from a flock of Herring Gulls. Although it was constantly alert, I was able to approach within two hundred feet of it; from this distance I studied it with 8x binoculars. When I purposely alarmed it, it took off and flew strongly, heading directly over the lake in a westerly direction.

Chen hyperborea hyperborea. LESSER SNOW GOOSE.—On November 2, 1932, I saw a flock of about eighty resting on Lake Michigan at Union Pier. I kept them under observation for some length of time. Many of the individuals were grayish; these were most likely immature birds.

Arenaria interpres morinella. RUDDY TURNSTONE.—A pair of adults seen on August 30, 1933, on the beach at Union Pier.

Catoptrophorus semipalmatus inornatus. WESTERN WILLET.—On August 24, 1934, two were seen on the beach of Lake Michigan at Union Pier. The birds were very tame, allowing a close approach, thus giving me an opportunity to make a satisfactory identification. They were not very active, and showed very little of the nervousness that is characteristic of many shore-birds. The field marks in flight were noted when I alarmed the pair.

Mr. Francis M. Weston records a "second definitely known occurrence of the Willet in the state of Michigan." (Auk, Vol. LI, 1934, 231). There is also, however, a sight record for South Haven, Berrien County (sic), Michigan by Mr. Chas. Theo. Black. (Auk, Vol. LI, 1934, 100).

Tyto alba pratincola. BARN OWL.—A taxidermist at New Buffalo showed me a specimen that he had just mounted. He stated that it was shot in the neighboring village of Three Oaks. This was in October, 1932.

Nyctea nyctea. SNOWY OWL.—The writer's brother secured a fine specimen at Union Pier on November 26, 1930.

Cryptoglaux acadica acadica. SAW-WHET OWL.—I have two records of this Owl: on June 10, 1932, I found a dead specimen on the Lake Michigan beach near New Buffalo; on April 14, 1934, I found two dead specimens on the same beach at Union Pier. All of them were adult birds.

Thryomanes bewickii bewickii. BEWICK'S WREN.—One seen at Union Pier on September 15, 1932, and another was seen at New Buffalo on March 31, 1934.

Thryothorus ludovicianus ludovicianus. CAROLINA WREN.—V. R. Krametbauer and myself noted this bird in the former's garden at Union Pier on August 5, 1933; the following day we saw it there again, presumably the same individual.—GEORGE F. RAZ, *Union Pier, Michigan*.

Notes on Some Ohio Birds.—Recent field investigations in Ohio and examinations of skins in the Ohio State Museum and the Museum of Zology of the University of Michigan, have resulted in the following observations.

Gavia immer. LOON.—It has been generally assumed that most, if not all of the Loons of this species that migrate through Ohio are the Common Loon (*Gavia immer immer*). An examination of nine skins of Loons, taken in Ohio and now preserved in the Ohio State Museum, indicate that this assumption may be wrong, for six of these nine skins are referable to the Lesser Loon (*Gavia immer elasson*). The remaining three are apparently intergrades, which lean toward the typical subspecies.

That the larger subspecies *Gavia immer immer* does occur in typical form in Ohio is virtually certain, however. Mr. Leonard W. Wing has pointed out to me, that a few of the 27 skins of Loons taken in Michigan and now in the Museum of Zoology of the University of Michigan are certainly referable to *Gavia immer immer* as currently described, though the majority are more or less typical of *Gavia immer elasson*. It is therefore obvious that some of the Loons which pass through Ohio belong to the larger eastern race.

Spatula clypeata. SHOVELLER.—The following observations definitely indicate, apparently for the first time, that this Duck occasionally nests in Ohio. Mr. Nevin O. Winter of Toledo has informed me that six or seven years ago he saw a brood of one-third grown Shovellers, accompanied by a female and male, in a marsh near the village of Gypsum, Ottawa County. During the spring and summer of 1932, Mr. Edward L. Wickliff and I, while making a survey of the Ducks nesting in the larger marshes that border the western end of Lake Erie and Sandusky Bay, noted a pair of Shovellers which gave indications of nesting. This observation was made on June 10, in the Winnous Point Marsh, Bay Township, Ottawa County. An intensive search for their nest however, was unsuccessful at this time. On a later visit to the same locality in this marsh, on July 6, Dr. Earl C. O'Roke of the University of Michigan and I found a female Shoveller with six half-grown young, which showed the highly characteristic Shoveller bill. Unfortunately, none of the young birds was collected.

Nyroca marila. GREATER SCAUP DUCK.—In a note published in 'The Auk'¹ in 1931 on the two species of Scaup Ducks in Ohio, I stated: (1) that after studying these birds in the field from 1924 to 1931 and measuring over 350 specimens taken in Ohio, I had come to the conclusion that the Greater Scaup was a very rare Ohio bird, while the Lesser Scaup was one of the dominant Ohio migrant Ducks; (2) that all the Scaups measured were Lesser Scaups; (3) that all the supposed Greater Scaups deposited in museums which I had measured were in reality Lesser Scaups; and (4) that though I had not seen a preserved Ohio Greater Scaup or measured one in the flesh, I had on rare occasions seen birds in the field which unquestionably were Greater Scaups.

Since 1931 many more field observations have been made and more than 175 additional Scaups measured. During this later study, which is in full agreement with the earlier finding, a few Ducks were observed in the field which were, beyond reasonable doubt, Greater Scaups; and one of the 175 birds measured was of that species. This one Greater Scaup, a female, was illegally shot on February 17, 1934, as it swam and fed on the waters of a small pond near the city of Lorain, Lorain County. The bird was confiscated by State Game Protector W. F. Holcomb, who later gave it to me. The skin of this bird is now in the Ohio State Museum (No. 6623).

Field investigations by various Michigan ornithologists, as well as my own during the past year, indicate that the Greater Scaup is a fairly numerous spring and fall transient through the northern half of Michigan, and that small flights sometimes occur in the southern half of the state. From this it is gathered that most of these birds must pass to the north of Ohio in their migrations between their northwestern breeding grounds and their wintering grounds on the Atlantic coast. Also, that southern stragglers from this migration can be expected in Ohio.—MILTON B. TRAUTMAN, *Museum of Zoology, Univ. of Mich., Ann Arbor, Mich.*

Unusual Records from Lincoln County, Montana.—*Accipiter cooperi*. COOPER'S HAWK.—Single birds of this species were observed near Fortine on November 24 and on December 23, 1934. There seems to be only one previous published record of the occurrence of this species in Montana in winter (*Condor*, 1933, p. 121).

Falco rusticolus candicans. WHITE GYRFALCON.—On the morning of October 24, 1933, while my brother and I were cutting commercial Christmas trees in a Douglas fir forest near Fortine, a large white bird, approaching from the north, alighted on the top of a dead larch about a hundred yards from us. A few seconds later a similar bird appeared from the same direction, passed over the perching bird, and in turn alighted on a stub about a hundred feet from where we stood. During the twenty or thirty seconds that it remained there, looking about, we were afforded a fine view of a beautiful Gyrfalcon with almost entirely white plumage. As the first bird continued its flight southward, the one we were watching took wing again and followed. While we were still watching the departing birds, and marveling at the unusual sight at one time of *two* individuals of this rare visitor to Montana, a *third* Gyrfalcon, similarly white, flew low over us, following the others. We did not see a Gyrfalcon again that day or at any other time during the winter. (For previous records of this species at Fortine, see the *Condor*, 1933, p. 122.)

Nephoecetes niger borealis. BLACK SWIFT.—One bird was seen in the Cabinet Mountains, along Granite Creek, near Libby, on June 28, 1933. On June 5, 1934, one was observed at Fortine; and on the following day a single bird was seen over a rocky cañon of the Stillwater River, near Stryker.

¹ Trautman, *Auk*, XLVIII, 1931: 257-258.

Cyanocephalus cyanocephalus. PIÑON JAY.—A bird of this species was seen near Fortine on November 4, 1932.

Lanius ludovicianus excubitorides. WHITE-RUMPED SHRIKE.—Single birds were observed in migration at Fortine on August 23, 1932, and May 21, 1933. These constitute the westernmost records for this species in Montana.

Calcarius lapponicus alasensis. ALASKA LONGSPUR.—Two birds were seen at my home near Fortine on September 30, 1928. One was observed there on October 11, 1929. At the same place a bird was seen daily from October 20 to 29, 1931; and one was observed on January 19, 1935.—WINTON WEYDEMAYER, Fortine, Montana.

A Good Word for the Field Ornithologist.—In 'The Auk' for January, 1935, Dr. Herbert Friedmann describes a new race of *Leucopetornis princeps* from Ecuador. The name of the field collector is not given being apparently unknown. This is unfortunate as the history of American zoology has sometimes shown the need of additional data, as to locality and date, from the collector of a type specimen, if he be living. Perhaps Dr. Friedmann has created a monument to an "unknown soldier." —MORRIS M. GREEN, Ardmore, Penna.

Some Bird and Egg Weights.—During the summer of 1934 a few birds were collected at Churchill, Manitoba, by Mr. F. M. Baumgartner and myself, and when time and equipment permitted weights were recorded. While the list is woefully incomplete, I submit it for what it is worth.

The adult birds, with the exception of the Least Sandpiper on July 4 and the molting August Tree Sparrows, were pre-nesting birds with gonads not fully developed. The first nests were found on June 11, most of them in the two weeks following. The Dowitcher and Snow Buntings were migrants, and the Smith's Longspurs were first seen in the vicinity on the day on which they were collected, males arriving a few days before the females.

The age of the young birds is based either upon the large amount of unassimilated yolk in the body cavity ("new hatched") or upon a definite acquaintance with the nest and locality.

Unless otherwise specified the records are based on one specimen or one set of eggs. Egg weights however are the average of the individual eggs in the set (or in several sets) and bird weights are the average of the individuals where more than one are indicated. All weights are in grams.

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|---|---------------------------------|-----------|
| Pacific Loon. (<i>Gavia a. pacifica</i>). | Two, two days old, July 16..... | 86.15 gr. |
| Old Squaw. (<i>Clangula hyemalis</i>). | Five, new hatched, July 14..... | 28.50 |
| Red-breasted Merganser. (<i>M. serrator</i>). | Five, few days old, Aug. 4.... | 90.50 |
| Willow Ptarmigan. (<i>Lagopus l. albus</i>). | Two, new hatched, July 11.... | 15.25 |
| Semipalmented Plover. (<i>Charadrius semipalmatus</i>). | Adult ♀, July 17.. | 8.12 |
| Semipalmented Plover. (<i>Charadrius semipalmatus</i>). | One, new hatched, July 20..... | 7.15 |
| Semipalmented Plover. (<i>Charadrius semipalmatus</i>). | Two, few days old, July 13..... | 11.05 |
| Golden Plover. (<i>Pluvialis d. dominica</i>). | Four, new hatched, July 16 .. | 18.20 |
| Golden Plover. (<i>Pluvialis d. dominica</i>). | One, six days old, July 19.... | 25.40 |
| Least Sandpiper. (<i>Pisobia minutilla</i>). | Adult ♂, July 4 | 23.15 |
| Dowitcher. (<i>Limnodromus g. griseus</i>). | Adult ♂, June 12..... | 101.42 |
| Dowitcher. (<i>Limnodromus g. griseus</i>). | Four, new hatched, July 6.... | 3.90 |
| Red-backed Sandpiper. (<i>Pelidna a. sakhalina</i>). | Four, new hatched, July 11..... | 7.49 |

| | |
|--|----------|
| Stilt Sandpiper. (<i>Micropalama himantopus</i>). Two, one day old, July 18 | 7.80 gr. |
| Semipalmated Sandpiper. (<i>Ereunetes pusillus</i>). Four, new hatched, July 5..... | 5.20 |
| Northern Phalarope. (<i>Lobipes lobatus</i>). Adult ♀, June 10..... | 5.52 |
| Northern Phalarope. (<i>Lobipes lobatus</i>). Six, new hatched, July 11..... | 4.25 |
| Arctic Tern. (<i>Sterna paradisaea</i>). One, two days old, July 13..... | 4.25 |
| Northern Water-Thrush. (<i>Seiurus n. noveboracensis</i>). Adult ♀, June 8 | 15.60 |
| Common Redpoll. (<i>Acanthis l. linaria</i>). Three adult ♀s., June 8..... | 12.02 |
| Common Redpoll. (<i>Acanthis l. linaria</i>). One adult ♀, June 8..... | 14.27 |
| Tree Sparrow. (<i>Spizella a. arborea</i>). Five adult ♂s., August 2..... | 17.30 |
| Tree Sparrow. (<i>Spizella a. arborea</i>). Four adult ♀s., August 2..... | 16.50 |
| Tree Sparrow. (<i>Spizella a. arborea</i>). Five, new hatched, July 2, 1933.. | 1.64 |
| Harris's Sparrow. (<i>Zonotrichia querula</i>). Adult ♀, June 8..... | 31.20 |
| Gambel's Sparrow. (<i>Zonotrichia l. gambeli</i>). Adult ♂, June 8..... | 27.00 |
| Gambel's Sparrow. (<i>Zonotrichia l. gambeli</i>). Adult ♀, June 8..... | 27.30 |
| Smith's Longspur. (<i>Calcarius pictus</i>). Adult ♂, June 13..... | 30.90 |
| Smith's Longspur. (<i>Calcarius pictus</i>). Adult ♂, June 18..... | 26.32 |
| Snow Bunting. (<i>Plectrophenax n. nivalis</i>). Three adult ♂s., June 8.... | 34.35 |
| Snow Bunting. (<i>Plectrophenax n. nivalis</i>). Adult ♀, June 9..... | 23.40 |

EGG WEIGHTS:

| | |
|--|-------|
| Oldsquaw Duck..... | 34.67 |
| Marsh Hawk. (<i>Circus hudsonius</i>) | 30.12 |
| Semipalmated Plover..... | 8.12 |
| Hudsonian Curlew. (<i>Phaeopus hudsonicus</i>). Two sets | 45.40 |
| Least Sandpiper..... | 4.87 |
| Stilt Sandpiper. Two sets..... | 11.20 |
| Semipalmated Sandpiper. Two sets..... | 6.23 |
| Wilson's Phalarope. (<i>Steganopus tricolor</i>). Four sets..... | 8.77 |
| Northern Phalarope..... | 5.52 |
| Parasitic Jaeger. (<i>Stercorarius parasiticus</i>)..... | 46.37 |
| Bonaparte's Gull. (<i>Larus philadelphia</i>)..... | 28.50 |
| Arctic Tern. Four sets..... | 18.52 |
| Tree Sparrow..... | 1.88 |
| Harris's Sparrow..... | 3.25 |
| Lapland Longspur..... | 2.73 |

—A. MARGUERITE HEYDWEILLER, Cornell University, Ithaca, New York.

RECENT LITERATURE.

Allen's 'American Bird Biographies.'—We have had occasion frequently to call attention to the admirable "bird autobiographies" written by Dr. A. A. Allen for 'Bird-Lore' and it is a satisfaction to have twenty of these published in book form under the above title. Dr. Allen's happy thought of having the birds speak for themselves presents the information to the reader in a most attractive form while he cleverly embodies in the accounts the results of his own wide experience, together with what may be necessary from the work of other reliable writers, to make the life-histories complete.

The wealth of illustrations, provided through the author's well known ability with the camera, is greatly enhanced by twenty beautiful reproductions of paintings by Dr. George M. Sutton—ten in colors and ten wash drawings in black and white. The color plates which portray the Scarlet Tanager, Baltimore Oriole, Belted Kingfisher, Bluebird, Green Heron, Ruby-throated Hummingbird, Flicker, Redstart, Robin and Goldfinch offer the artist a wonderful opportunity of which he has taken full advantage and has produced some of the best of his many excellent bird paintings. The selection of the subjects is well made and presents birds of varied types and at the same time species well known to all. We heartily recommend Dr. Allen's book not only to the young ornithologists who desire instruction put in an attractive form, but to the older bird students who are looking for reliable information on various phases of bird life.—W. S.

Saunders Guide to Bird Song.—With the increasing interest in bird study we must needs have books treating in detail of particular phases of the subject. Migration, field identification, etc., have already received such attention and now Mr. Aretas Saunders, for many years past a specialist on bird song, gives us this excellent guide² to his favorite branch of ornithology. His little book on 'Bird Song' published by the New York State Museum has already been noticed in these columns (Auk, 1929, p. 403). In that work he discussed song from many points of view and now presents a 'Guide' by which others may recognize the songs of the birds of northeastern United States. He has had many years' experience as a teacher in trying out different methods for making a description of a song that will be identifiable when the real song is heard, by one who has never heard it before. He finds that while the syllabic method is good, it is best not to use actual words as they often induce wrong accent or emphasis, and he therefor uses vowels or vowels and consonants in combinations which resemble no words in any language. To supplement this, and indeed more important than the syllables, he has devised a scheme of horizontal dashes, whose length represents the length of the note and the thickness of which indicates the volume. When notes are distinct so are the dashes, but when connected then the dashes are connected by vertical lines, and when slurred by curved lines. A study of the graphs which are presented for each species will show how readily one can grasp the method, while the syllables directly below show the character of the

¹ American | Bird Biographies | Containing the complete life-histories of | familiar birds | written in autobiographical form | By Arthur A. Allen, Ph.D. | * * * * | with ten color plates and | ten wash drawings By George Miksch Sutton | and 190 photographs of the birds in nature | by the author. Comstock Publishing Company, Inc. | Ithaca, New York | 1934. Pp. i-ix + 1-238. Price \$3.50.

² A Guide | to Bird Songs | Descriptions and Diagrams of the Songs | and Singing Habits of the Land Birds | of Northeastern United States | By | Aretas A. Saunders | Author of "Bird Song" | D. Appleton-Century Company | Incorporated | New York, London | 1935 | Pp. i-xvii + 1-285. Price \$2.50

note—liquid, sibilant, etc. A letter at the left of each chart indicates the actual musical pitch at that point—A''' etc., while each eighth of an inch in vertical height represents a half-tone and each half inch horizontally a second in time.

Accompanying each description of a song there is a very brief description of the bird, bringing out clearly its chief color characteristics, and at the beginning of the book an ingenious "Key" which leads one to one or other of the 26 groups into which bird songs are divided, while further keys bring us down to the species.

Mr. Saunders does not consider musical notation at all, as he rightly claims that it is unsuited to bird song since birds make use of musical intervals not capable of indication in our system of music. He also omits any attempt at a scientific analysis of bird notes such as Mr. Brand has discussed recently (*Auk*, 1935, pp. 40–52) since the present work is intended wholly as a guide for the field student.

Mr. Saunders has, we think, produced the best book on bird song from the popular point of view that has yet been published. It is a difficult subject to present and the attempts at representation by words from human speech or by musical notation have been, with the exception of a few striking songs, almost total failures.

We commend this little book to all bird students.—W. S.

Herrick's 'The American Eagle.'—It was our pleasure, some years ago, to publish in these columns a series of most interesting articles on the life-history of the Bald Eagle by Prof. Herrick, based upon his painstaking studies of the bird at several eyries in northern Ohio. (cf. *Auk* for 1924, 1932 and 1933). Now we have all of the information there presented, with much additional matter, combined in book form,¹ with the same and other illustrations from photographs taken by the author from the special steel tower erected near the nest tree.

Prof. Herrick has given us one of the most thorough life-history studies yet published on any species of American bird and has presented it in a form that will attract the interest not only of the ornithologist but of anyone who likes to read of nature and of determination in carrying out a planned investigation in the face of many obstacles.

Beside the studies at the Eagle's nest the author has added accounts of the Eagle as an emblem in ancient and modern times as well as the history of its adoption as our national bird and of its use on our coins, an interesting chapter in the history of the United States, in which Benjamin Franklin, John Adams, Thomas Jefferson and Daniel Webster played a part.

Prof. Herrick has certainly earned the title of the "biographer of our national bird!"—W. S.

Wynne-Edwards on the Birds of the North Atlantic.—This valuable and extremely interesting report² is based primarily upon eight voyages between Montreal and the English Channel on R. M. S. *Ascania* from May to September, 1933. The systematic portion of the publication covers observations on 28 species with much discussion of their distribution and migration, many of them illustrated with pen sketches by the author and by maps.

While these accounts make up the bulk of the paper the introductory portion is perhaps even more interesting. Here the author contrasts the study of the birds of a land area and of a section of the ocean and emphasizes the impossibility of a reasonably prolonged residence in the latter, which is always regarded as a necessity in the

¹ The American Eagle | A Study in Natural and Civil History | by Francis Hobart Herrick | Author of "Audubon the Naturalist" | D. Appleton-Century Company | Incorporated | New York, London | 1934 | Pp. i–xx + 1–267. Price, \$3.50.

² On the Habits and Distribution of Birds of the North Atlantic. By V. C. Wynne-Edwards. Proc. Boston Soc. Nat. Hist., Vol. 40, No. 4, pp. 233–346. pl. 3–5. January, 1935.

former. His method of making a series of trips over essentially the same route is explained and the almost constant observations and counting of the birds seen, which could later be correlated with the ship's position at the time of observation. The average number of individuals of each species for different parts of the ocean was then calculated.

Incidentally the conditions of life in pelagic birds are discussed and the fact pointed out that truly pelagic species must drink salt water and will not drink fresh and that other groups of sea birds may drink salt water to some extent. Food seems to have a great deal to do with their distribution which is often clearly marked where no observable causes for limitations are evident.

The author divides his oceanic birds into three groups: (1) Inshore—Cormorants, Scoters, Eiders, most of the smaller species of *Larus* and, at certain seasons, Terns. (2) Offshore—Gannet, all Auks (except the Dovekie), *Larus fuscus* and *L. argentatus*. (3) Kittiwake, almost all Petrels and Shearwaters and at certain seasons, Phalaropes and Jaegers. The Dovekie is also provisionally placed here.

Mr. Wynne-Edwards's work is apparently the first attempt to treat comprehensively of the birds of any ocean area, even so well known an area as the North Atlantic. His paper should be read by every ornithologist interested in sea birds or in problems of distribution; it is an outstanding faunal work.—W. S.

Wetmore and Brooks on American Owls.—The tenth of the 'National Geographic' series of portraits of North American birds by Allan Brooks, appears in the February, 1935, issue of the magazine with excellent text by Alexander Wetmore, covering the general habits and history of Owls and biographies of the several species. The plates reproduced from Major Brooks' paintings are very pleasing and fully up to his usual high standard. Several half-tones from photographs add to the interest of the article.

We have already protested against the captions to the plates obviously composed by someone on the editorial staff and following the style of newspaper illustrations. It would be far better to make the names of the birds the prominent feature of the caption instead of burying them in the midst of several lines of description. What this sort of thing may lead to is seen in a recent advertisement of the 'National Geographic' in which a colored plate of the Belted Kingfisher is shown as a sample of the illustrations; the caption reading "A Belted Kingfisher of the Flycatcher Family" (italics ours). Most readers will know, what the editor responsible for this caption did not know, that it is the Kingbird not the Kingfisher that is a member of the Flycatcher family, but if these pictures are to be, as stated "of permanent reference value" it would be well to put the preparation of the captions as well as the text in the hands of an ornithologist!—W. S.

Greenway on New Guinea Birds.—Mr. Herbert Stevens was engaged in collecting for the Museum of Comparative Zoology during the years 1932 and 1933 in the coastal range of northeastern New Guinea, between the Markham and Waria Rivers. Mr. James C. Greenway, Jr., who has already described some new forms of birds from the material sent home, now presents¹ the results of his study of the entire collection, consisting of some 1300 specimens representing 207 forms.

There is a preliminary discussion of literature and of the range of species; then a narrative by Mr. Stevens; and finally the annotated list which occupies the bulk of the paper. Three new forms are here described, *Rallus striatus insulsus* (p. 28),

¹ Birds from the Coastal Range between the Markham and Waria Rivers, northeastern New Guinea. By James C. Greenway, Jr., Proc. New England Zool. Club, Vol. XIV, pp. 15-106. February 1, 1935.

Mirafra javanica aliena (p. 50), and *Anthus australis exigua* (p. 53). The notes refer mainly to relationship and plumage but the stomach contents of a number of specimens are given, the insects identified by Dr. Philip Darlington. We note that eighteen Birds of Paradise and Bower Birds were obtained on the expedition.

Mr. Greenway has done a good piece of work in his study of this collection and has made a valuable contribution to the ornithology of New Guinea.—W. S.

van Rossem on Birds of Middle America.—As a result of his examination of types in various European museums and his study of Central American and Mexican collections in the Museum of Comparative Zoölogy, Mr. van Rossem has published a composite paper¹ on Middle American birds which adds greatly to our systematic knowledge.

The first section relates to the birds of Guatemala and is supplementary to, and critical of, Griscom's admirable work on the birds of this country. Besides adding several species to the list and straightening out the nomenclature of others the following new forms are proposed: *Burhinus bistratus vigilans* (p. 388), Costa Rica; *Coccyzus minor continentalis* (p. 389), El Salvador; *C. m. cozumelae* (p. 390), and *Xanthoura luxuosa cozumelae* (p. 397), Cozumel Isl.; *X. l. centralis* (p. 397), Guatemala; *Pheugopedius pleurostictus oblitus* (p. 399), El Salvador; *Mimus gilvus clarus* (p. 401), Quintana Roo, Mex.; and *Granatellus sallaei griscomi* (p. 403) and *Zarhynchus wagleri ridgwayi* (p. 405), Costa Rica.

The second section of the paper deals with the types of Middle American birds in foreign museums and their identity. In this connection *Caprimulgus vociferus setosus* (p. 408) is proposed for *C. v. macromystax* Wagler, which proves to be a synonym of *C. v. vociferus*.

Mr. van Rossem's last section is an annotated list of William Brewster's Mexican collections now in the Museum of Comparative Zoölogy made by Abbott Fraser, Cahoon and McLeod. Itineraries of the three are presented and then a complete list of their material.

In this the following new forms are proposed: *Ortalis wagleri griseiceps* (p. 431), *Anthoscenus constantii surdus* (p. 439), *Trogon elegans canescens* (p. 441), *Turdus rufopalliatus grisiior* (p. 461), *Vireo hypochryseus nitidus* (p. 465), *V. solitarius piniculus* (p. 467), *Pheucticus chrysopelplus dilutus* (p. 479), *Pipilo masculinus griseipygialis* (p. 482), *P. fuscus perpallidus* (p. 483), *Aimophila quinquestriata septentrionalis* (p. 485), and *A. bilineata confinis* (p. 487).

These collections were made from 1884 to 1888 and after describing a few novelties Mr. Brewster did no further work upon them. It will be a satisfaction to his friends that the material that he brought together has at last been studied and the results made available to all. Mr. van Rossem is to be congratulated upon a valuable contribution to the ornithology of a region upon which he is at present one of our leading authorities.—W. S.

Mousley on the Woodcock.—The entire January issue of the 'Canadian Field Naturalist' is devoted to a paper by Mr. Henry Mousley on the Woodcock—both the English and the American species, beginning with certain ancient drawings of the bird in the Emma Shearer Wood Library in McGill University and coming down to the most recent field observations of American and British ornithologists.

One will find in this paper a summary of the various theories and facts regarding the anatomy of the birds, the movement of the upper mandible, the source of the various noises made both in the air and on the ground, the carrying of the young and

¹ Critical Notes on Middle American Birds. By A. J. van Rossem. Bull. Museum Comp. Zoölogy, Vol. LXXVII, No. 7. December, 1934. Pp. 387-490.

the protective or luring value of the tail coloration. Mr. Mousley has done a good service in bringing together for handy reference all of this matter. His discovery of very early knowledge of the bill movement was previously presented in 'The Auk' for July, 1934.—W. S.

Whistler's 'Popular Handbook of Indian Birds.'—The first edition of this notable work¹ appeared in 1928 (see Auk 1928, p. 389) and has proven so desirable that a new edition has been demanded. In the first edition a selection of 250 of the more common Indian birds was presented for detailed treatment, covering those most frequently encountered. In the present edition these have been increased to 275, while brief mention is made of some 230 others, so that the book now presents information on approximately 500 species which include the birds of all parts of India with the exception of some of the rarest forms.

Not only has the text been amplified in this and other ways but three additional plates have been prepared, one of them in colors, making twenty in all.

Such a handbook is invaluable to the resident or visiting ornithologist, while to residents of other countries unable to visit India it will furnish interesting information on species entirely unknown in their own faunas. Of the Green Bee-eater, a bird somewhat allied to the Kingfisher, we read: "It is one of the commonest birds of India, and attracts attention from its beautiful coloration and from its favorite perch being on the telegraph-wires. * * * It spends its life hawking for insects from a perch to which it returns after every flight and only visits the ground for nesting purposes. The eggs are laid in a chamber reached by a tunnel usually excavated in the face of a perpendicular bank." There are also interesting accounts of the numerous Cuckoos one of which, the large black Koel, is parasitic on the Crow. The book is one that should be in every well selected ornithological library.—W. S.

Yeates on 'The Life of the Rook.'—This excellent book² is at once a careful study of bird behavior and a dissertation on tree-top photography, upon which art the author is an authority. This big bare-faced Crow is of especial interest to American bird students since it possesses characteristics, both of appearance and habits, quite different from our familiar Crow of the United States while its gregariousness at nesting time recalls our smaller coastal Fish Crow. Its very name, too, is familiar in the word "rookery" originally referring to its own nesting communities but now generally used in this country in connection with Herons, Pelicans and other colony-nesting species. The bird too, is familiar to us by its frequent mention in the stories of so many British writers of fiction as of almost universal occurrence about the old English country seats.

Our author's first interest in Rooks was in his boyhood egg collecting days when their tree-top nesting habits challenged his ability to reach their homes. Then with his success in scaling the trees and his interest in photography they became his favorite study. The whole life of the bird is covered in the chapters: Nesting, Courtship, Period of Incubation, After Hatching, Summer and Autumn, Winter. The author brings out some very interesting features such as "mobbing" mating birds by other members of the rookery, which he thinks is only done in the case of promiscuous

¹ Popular Handbook of Indian Birds | By Hugh Whistler, F.Z.S. | Late Indian (Imperial) Police | Illustrated with twenty full-page plates (ninety-five figures) | of which five are coloured, and ninety-six figures | in the text, from drawings by H. Grönvold | Second Edition | Gurney and Jackson | London: 33 Paternoster Row, E. C. | Edinburgh: Tweeddale Court | 1935. Pp. i-xxvii + 1-513. Price 15 shillings net.

² The Life of the Rook | By | G. K. Yeates | Part Author of *Bird Haunts in Wild Britain* | With 22 illustrations | from Photographs by the Author | Philip Allen | London | 69 Great Russell St., W. C. 1. 1934. Pp. 1-95. Price, 10 shillings, 6 pence, net.

mating of a regularly mated bird; and the anti-Jackdaw flights when the whole rookery with the exception of incubating birds regularly takes after a passing flock of vociferous Daws—which are by the way, another and smaller member of the Crow family.

All in all 'The life of the Rook' is a most attractive and well written study of bird life while the chapter on Tree-top Photography will prove of especial interest and benefit to our bird photographers. Mr. Yeates says that he has never photographed a more interesting species, largely because there is "always something in the wind. There is activity enough in a big ternery or gullery, but it seems in some way a very stereotyped form of activity, and lacking the character and individuality of the Rook's ways." He also comments upon one of the obstacles to the proper interpretation of bird behavior, i. e. the prevalence of popular ideas and the difficulty to realize to what an extent we are influenced by "preconceived notions which arise from mere supposition and vulgar rumor."

Sixteen admirable plates, from photographs by the author, give one an excellent idea of the nest activities of the species while a text cut shows how a tree blind may be made. The book is handsomely printed on extra heavy paper and is a credit to all concerned.—W. S.

Thomson's 'Birds from the Hide.'—This book¹ of Mr. Ian M. Thomson will prove a delight to all who, like him, make bird photography a hobby and a diversion from a professional life. With but a page of preface, he plunges directly into the stories and experiences connected with his photography of British birds, some of them "extreme rarities" and others those "charming commoners, which all of us know."

While our author states that he has put down merely what he has seen and that his experiences may seem absurd to a "first rank" ornithologist we think that he has recorded not a little information with real value in the study of bird behavior during the hours spent in the cramped "hide" or tent, not to mention the beautiful pictures that his skill with the camera has produced. Sixty-three of these are published in full page sepia plates arranged with explanations at the end of the book. All are studies at the nest and not infrequently contain both parents as well as the young. Eighteen species are considered, the Bittern, Water Rail, Harrier, Bearded Tit, Short-eared Owl, Crested Grebe, Skylark, Lapwing, Tufted Duck, Curlew, Red-throated Diver, Hooded Crow, Twite, Northern Phalarope, Skua, Jaeger, Long-tailed Titmouse, and Bullfinch. From pictures and text the reader is able to form a close acquaintance with these birds of "Old England" and to compare them with their representatives in America.—W. S.

Mathews on the Procellariiformes.²—Mr. Gregory M. Mathews, as is well known, is engaged in monographing the Procellariiformes and has recently published two papers of a preliminary character in the hope that they may arouse interest in the subject and induce those in possession of additional information on any of the Petrels and Albatrosses to forward it to him, as well as their views upon his conclusions as to the relationship and "systematics" of this puzzling group.

His first paper covers the genus *Fregetta* and its allies in which he shows pretty

¹ Birds from the Hide | Described and Photographed | By | Ian M. Thomson | With sixty-three Plates | in Photogravure. A. & C. Black Ltd. 4, 5, & 6 Soho Square, London, W 1. 1933. Pp. I-xi + 1-108. Price 7 shillings, 6 pence.

² On *Fregetta Bonaparte* and Allied Genera. By Gregory M. Mathews. Novitates Zoöl. XXXIX, pp. 34-54, October, 1933.

A Check List of the Order Procellariiformes. By Gregory M. Mathews. Novitates Zoöl. XXXIX, pp. 151-206, December, 1934.

conclusively that the bird taken as a straggler off St. Marks, Florida, and called *Fregetta tropica tropica* (Gould), in the last edition of the A. O. U. 'Check-List,' should be called *Fregettornis grallaria grallaria* (Gould)—providing, of course, that one agrees to subdivide the genus *Fregetta*. We find one new name viz.: *Fregetta guttata* (p. 45), proposed tentatively on p. 45 and formally on the next page as *Fregettornis guttata*. *F. leucogaster deceptis* which appears on p. 4 without authority, and apparently new at that point, was really described in the previous year in the Bulletin of the British Ornith. Club.

Mr. Mathews' second paper is a complete list of the Procellariiformes with original references and synonymy, distribution and breeding localities. There is also an elaborate key to which much thought has evidently been given, and a nominal list of species according to breeding areas.

Several names heretofore apparently overlooked have been discovered by the author and listed in the synonymy—fortunately they do not affect existing nomenclature. Such are: *Procellaria grönlandica* Gunn.; *P. melanonyx* Nilsson and *P. cinerea* Gunn. (p. 160); *P. harlic* Voigt (p. 164); *P. vulgaris* Wood and *P. scotorum* Partington (p. 178); *P. propontidis* and *P. bysantina* Acerbi (p. 179), and *P. atlantica* Bon. (p. 189).

We certainly owe a debt of gratitude to Mr. Mathews for the amount of time and labor which he has devoted to the unravelling of the complicated history and nomenclature of these pelagic birds and we trust that those in a position to offer helpful criticism will not hesitate to do so in order that his completed work may be as nearly accurate as it is possible to make it.—W. S.

Hachisuka's 'Birds of the Philippines.'—The third volume of this work¹ is before us and maintains the high standard of typography, etc., of its predecessors. It carries the systematic treatment of the subject from the birds of prey to the end of the groups formerly associated as the "Picariae," leaving the Passerine families for the remaining volumes.

The text follows the plan explained in previous reviews of this work (cf. Auk 1931 and 1933), presenting very good descriptions, usually taken verbatim or nearly so from McGregor's 'Manual of Philippine Birds,' although the author seems to have forgotten to mention the fact. There are comparisons with extra-limital forms and very short notes on habits and distribution often based on the same work. The book is lavishly illustrated, the present part containing forty-one plates, most of them in colors and a number of text figures. Some of the color plates by a Japanese artist, S. Koyabashi, are reproduced by an off-set process and the effect is rather vivid; but most of them, apparently from paintings by J. G. Keulemans, are delicate three-color half-tones printed on egg-shell paper with beautiful results; the uncolored plates are from wash drawings printed in sepia or chocolate brown.

A number of new races are described in the present volume and a careful examination of the pages reveals the following: *Otus rufescens burbridgei* (p. 51), Sulu; *O. r. malayensis* (p. 52), Mt. Ophir, Malacca; *Tanygnathus lucionensis moro* (p. 87), Sulu; *Halcyon winchelli nigrorum* (p. 142), Negros; *H. pileata palawanensis* (p. 142), Palawan; *Hydrocorax h. basilanica* (p. 154), Basilan; *Collocalia whiteheadi tsubame* (p. 176), Palawan; *Eudynamys scolopacea paraguena* (p. 213), Palawan; *E. s. onikakko* (p. 214), Mindoro; and *Centropus melanops banken* (p. 221), Samar. Five of the type speci-

¹ The Birds | of the | Philippine Islands | with Notes on the Mammal Fauna | By | The Marquess Hachisuka | F.Z.S., F.R.G.S. | * * * * | Part III | Pages 1-256 | H. F. and G. Witherby | 326 High Holborn, London, W. C. 1 | November 26, 1934.

mens are in the British Museum and five in the Tring Collection, now in the American Museum, New York.

The Marquess is to be congratulated upon the progress of the publication.—W. S.

Taka-Tsukasa's 'The Birds of Nippon.'—The fourth part of this sumptuous work¹ has appeared covering the Quail, genera *Bambuscula*, *Arborophila*, *Excalfactoria* and *Coturnix*. There is a color plate of the five species representing nine individuals closely grouped, rather well colored but in somewhat stiff attitudes. Several beautifully printed photogravures of scenery, representing habitats of the birds, add much to the attractiveness of the work. The accounts are presented in great detail with the original descriptions given in full, in the original language, and numerous quotations from the various authors who have written on each species.

Four pages of a "Bibliography of Japanese Ornithology," paged as part of the introduction, are included in this issue.

The paper and typography are of high quality.—W. S.

Furbay's 'Nature Chats.'—This little book,² its author tells us, consists of the informal talks that he has given his students "along the trail." It is evidently based more on compilation than original observation, at least so far as the several bird talks are concerned, and as is usually the case under these circumstances, many important sources have been overlooked, while some facts have been curiously misquoted. The information on bird migration is very far behind the times and the statement that the winter home of the Swallows is unknown will astonish most bird students. Probably the author was thinking of statements regarding the Chimney Swift which is not a Swallow. The winter home of the Bobolink, moreover, is not the Atlantic coast as is to be inferred from the text. The pen sketches of birds are exceedingly crude and many of them quite unrecognizable. So far as general nature study is concerned there is much information attractively presented with numerous quotations from the poets. It is perhaps fortunate that birds form but a small part of these "talks."—W. S.

Other Ornithological Publications.

Bailey, Alfred M.—The Haunts of the Wailing Bird. (Natural History, December, 1934.)—A beautifully illustrated account of the Limpkin (*Aramus p. pictus*) at the source of the Wakulla River, Florida.

Black, R. Delamere.—Charles Fothergill's Notes on the Natural History of Eastern Canada, 1816–1837. (Trans. Royal Canadian Inst., Vol. XX, Pt. I. 1934.)—Extracts from an extensive manuscript journal arranged in the form of an annotated list covering 117 species of birds. There are also shorter lists of mammals, reptiles and fishes with a few notes on plants.

Bradshaw, F.—The Grasshopper Sparrow and Lark Bunting in Saskatchewan. (Canadian Field Naturalist, December, 1934.)

Brodkorb, Pierce.—The name of the Western Race of Red-headed Woodpecker. (Occas. Papers of the Museum of Zoology, Univ. of Mich., No. 303. January 8, 1935.)—Confirms Oberholser in the existence of a northwestern race but disagrees

¹ The Birds of Nippon. By Prince Taka-Tsukasa. Volume I, Part 4. History of Japanese Ornithology Order Galli. H. F. & G. Witherby, 326 High Holborn, London, W. C. 1. Yokendo 7 Motozono-Cho, Kojimachi-Ku, Tokyo. February 1, 1935. Pp. lvi-lx + 169–238. Pl. xiii and 7 full page photogravures.

² Nature Chats | A Year Out-of-Doors | By John Harvey Furbay, Ph.D. | Professor of Biology | and | Director of Nature Education | The College of Emporia | Illustrations | by | William D. Vannard | 1933. Science Press Printing Company | Lancaster, Pa.

with his nomenclature and so names the supposed form *Melanerpes erythrocephalus caurinus* (p. 2).

Brockman, C. Frank.—Ptarmigan on Mount Rainier. (Amer. Forests, February, 1935.)—With four excellent photographs from life, showing the different seasonal plumages.

Carriker, M. A.—Descriptions of New Birds from Peru, with notes on the Nomenclature and Status of other Little-known Species. (Proc. Acad. Nat. Sci., Phila., LXXXVI, pp. 317-334. June 25, 1934.)—Some sixteen new forms are described and *Synallaxis rufogularis* Cherrie (nec Gould) is renamed *cherriei*. *Vestipedes aureliae tibialis* and *Pipramorpha macconnelli peruviana*, described by the author in previous papers, are rejected while several forms described by others are endorsed or considered as synonyms. There is a review of the races of *Cyclarhis vorenticeps* and a comparison of the genera *Creurgops* and *Malacothraupis* which Mr. Carriker considers should be united.

Chapman, Frank M.—Descriptions of New Birds from Mocha Island, Chile, and the Falkland Islands, with Comments on their Bird Life and that of the Juan Fernandez Islands and Chiloe Island, Chile. (Amer. Museum Novitates No. 762. December 29, 1934.)—*Aphrastura spinicauda bullocki* (p. 2), *Scelorchilus rubecola mochae* (p. 3) and *Turdus falklandii mochae* (p. 3) from Mocha and *Cistothorus platensis falklandicus* (p. 7) from the Falklands.

Chasen, F. N. and Kloss, C. Boden.—On a Small Collection of Birds from the Karimoen Djawa Islands. (DeTreubia, XIV, Livr. 2, December, 1933.)—Thirty-five forms listed.

Crook, Compton.—The Birds of Late Summer on Reelfoot Lake. (Jour. Tennessee Acad. Sci., January, 1935.)—An annotated list of species with a map and several views of this interesting lake; also a bibliography.

Danforth, Stuart T.—A List of the Birds known from Antigua, B. W. I. (Leeward Island Gazette, Supplement, November 16, 1933.)—Eighty species listed with a plea for the protection of the Hawks and other birds.

Elder, H. F. D.—Isle of May Bird Observatory. (Scottish Naturalist, January-February, 1935.)—Establishment of a Bird Observatory and "Trapping Garden" with the hope of imitating the work at Heligoland.

Grimes, S. A.—The Hooded Warbler in Florida. (Florida Naturalist, January, 1935.)—With photographs of nests.

Harkness, A. D.—English Sparrows at Vineland Station, Ontario. (Canadian Field Naturalist, December, 1934.)—A trap erected to catch Sparrows so as to save other box nesting species from their attacks, secured in nine years no less than 6911 Sparrows!

Kuroda, Nagamichi.—*Tringa melanoleuca* obtained on Jaluit Island, Marshalls, Micronesia. (Dobutsugaku Zasshi, 46, No. 549.)

Lowe, P. R.—On the need for the preservation of the Galapagos Fauna. Birds. (Proc. Linn. Soc. London, June and Sept. 1934.)—With Mr. H. W. Parker, who spoke for the reptiles, Mr. Lowe advocated some steps to save this interesting fauna from extermination which is threatened by the commercialization of the large lizards and the destruction of trees by collectors of a peculiar lichen used for dye, while domestic animals run wild are also a menace. There is much discussion of the origin etc. of the bird fauna.

Manuel, Canuto G.—Food of the Barred Ground Dove. (Phil. Jour. Sci. 55, Sept. 1934.)—Need of studying this species was indicated by its abundance in and near rice paddies. The investigation, including field observations and analyses of

305 stomach contents, revealed that the species is almost exclusively vegetarian. Weed seeds were found to compose 69.9 per cent of the total food, and rice 30.1 per cent; the rice eaten is obtained chiefly from stubble. The bird is considered of neutral importance in its feeding habits.—W. L. M.

MacDonagh, Emiliano J.—Materials of *Piaya cayana* in the Museum of La Plata. (Notas Prelim. del Mus. La Plata II, 1934.)—A discussion of the differential characters of *P. c. macroura* Gambel and *P. c. mogensenii* Peters and their distribution. In another paper by the same author he discusses the vertebrates and insects of San Blas giving a short list of birds. [In Spanish.]

Meylan, O.—Some Notes on the Avifauna of the Valleys of Anniviers and Tourtemagne. (Bull. Murithienne Soc. valaisanne Sci. Nat., 1932-1934.) [In French.]

Rehn, James A. G.—A Zoologist in the Pantanal of the Upper Paraguay. (Scientific Monthly, July, 1934.)—An account of the Matto Grosso Expedition of the Academy of Natural Sciences, which supplements the report on the birds by Stone and Roberts previously noticed in these columns.

Rowley, Francis H.—An International Appeal. (Published by the Massachusetts Society for Prevention of Cruelty to Animals.)—Against the oil nuisance on our coasts.

Schultz, Fred W.—Tampa Bay Rookery Warden's Report. (Florida Naturalist January, 1935.)

Seilern, Josef (Graf).—Ornithological Miscellany. (Ann. Nat. Hist. Museum in Wien., XLVII, July 1934.) I. Remarks on the Birds of South Peru. *Celeus grammicus latifasciatus* (p. 36) subsp. nov. II. *Turdus dauma aureus* in Corsica. III. On the Birds of Neusiedler-See. IV. *Gavia adamsii* in Austria. [In German.]

Shaw, Tsen-Hwang.—A Mute Swan from Peiping (Lingnan Science Jour., 13, No. 3, July 1934.)—[All of his publications in English.]

Shaw, T. H.—Notes on the Vertebrate Natural History of Pai-Yang Hu Region, Hopei Province. (Lingnan Science Jour. Vol. 13, No. 4, October, 1934.)

Shaw, T. H.—A Bearded Vulture from Sha-Chung, Chahar. (China Jour., XX, p. 359, 1934.)

Shaw, T. H.—Notes on the Birds of Chekiang. (Bull. Fan. Mem. Inst. of Biology, Peiping, China, V, No. 5. November 25, 1934.)—An annotated list of 179 forms of which 114 are for the first time recorded from the Province.

Soper, J. Dewey.—Zoological Collecting and Research in the Arctic Regions. (From Dept. Rept. "Canada's Eastern Arctic.")—An interesting account of conditions, equipment and methods.

Sutton, George Miksch.—Notes on the Birds of the Western Panhandle of Oklahoma. (Ann. Carnegie Museum, Vol. XXIV, pp. 1-50, December, 1934.)—An important and well prepared annotated list of 136 forms from this interesting Rocky Mountain foothill district of western Oklahoma, in which the author with Mr. John B. Semple spent the autumn of 1932. Attention is called to the breeding of several species of "eastern" affinities in this area and it is suggested that "certain individuals, young birds presumably, en route to long established breeding grounds to the northward, happen to be in the region at about the time the nesting urge is upon them, find the environment favorable * * * and remain to rear their young." While the subject is one that deserves most careful consideration we feel that such an explanation if true would have seriously broken up and well defined breeding ranges. It would seem that the migratory impulse must develop in plenty of time for the bird to reach its normal breeding range.

We do not understand the author's remark that the name Little Flycatcher

"records for all time mere nomenclatural confusions and mistakes." This name was carefully chosen in the 'Check-List' as the only one consistently employed in literature for this bird. Traill's Flycatcher having been applied to both forms at different times. A name is supposed to be a tag by which we may convey to someone else what we are talking about and since our rules of nomenclature compel us to change technical names we shall have no stability whatever if we change our English names to suit the whims of every individual. We congratulate Dr. Sutton upon his appreciation of this fact in adopting the English names of the 'Check-List' and making his comments upon them in foot notes.

Tout, Wilson.—Owls of Lincoln County, Nebraska. (Publ. No. 1 North Platte Bird Club, 1935.)—A neat little pamphlet giving the character of occurrence, range and personal experience with the several species of Owls found in the county. It will be of much value to local bird students and instructive to beginners. Mr. Tout, we understand, proposes to follow it with similar pamphlets on other groups of birds. (Price 10 cts., North Platte Bird Club, North Platte, Neb.).

Wetmore, Alexander.—The Status of *Minerva antiqua*, *Aquila ferox* and *Aquila lydekkeri* as Fossil Birds (Amer. Mus. Novitates, No. 680, December 4, 1933.)—We have in the Fossil List of our 'Check-List' a species of bird based upon the impression of a feather which was described by a botanist who took it for an impression of a piece of moss; likewise there was a jaw of a supposed small mammal described some years ago in England which turned out to be part of a claw of a crab. Now Dr. Wetmore demonstrates that the supposed Eagle claws, upon which the first two of the above species were based by Dr. Shufeldt, are in reality claws of an edentate mammal, both probably from the same individual, while the third is based upon fragments of bones belonging to both birds and mammals! In order to preserve the last name in the sense that Dr. Shufeldt intended, Dr. Wetmore has made a part of the tibio-tarsus, which really does belong to an owl-like bird, the type for which the new generic name *Protostrix* is proposed. Such are the intricacies and possibilities in the study of fossils!

Wetmore, Alexander.—Fossil Birds from Mongolia and China. (Amer. Mus. Novitates, No. 711. April 7, 1934.)—A report on avian fossils obtained by the Central Asiatic Expeditions of the American Museum of Natural History and some additional material from Szechwan, China. *Eogrusr aeola* (p. 3) and *Telecrex grangeri* (p. 13) are described as new.

Wetmore, Alexander.—Bird Remains from the Oligocene Deposits of Torrington, Wyoming. (Bull. Mus. Comp. Zoöl., LXXV, No. 7, October, 1933.)—*Buteo antecursor* (p. 298), *Bathornis celeripes* (p. 302) and *B. cursor* (p. 310) are described as new, while the author's subfamily *Bathornithinae* is elevated to family rank. In this connection the present reviewer has a confession to make. Dr. Francis Harper calls his attention to the previous appearance of the family name *Bathornithidae* in the index to the fourth edition of the A. O. U. Check-List. This was of course a misquotation of the subfamily name which occurs on p. 455. As the reviewer is recorded as being responsible for the preparation of the index, the fault is primarily his, but Dr. T. S. Palmer read the manuscript index and all of the Committee were supposed to have read the proof, we therefor leave the authorship of the family to experts on nomenclature with the hope that Dr. Wetmore may be left in undisputed possession of his name!

Wetmore, Alexander and Case, E. C.—A New Fossil Hawk from the Oligocene Beds of South Dakota. (Contrib. from the Mus. of Paleontology Univ. Michigan, IV, No. 8, January 15, 1934.)—*Buteo grangeri* (p. 129) described as new.

Yeatter, Ralph E.—The Hungarian Partridge in the Great Lakes Region. (Univ. Michigan School of Forestry and Conservation, Bull. 5, December, 1934.)—An exhaustive study of this introduced game bird, its life history, food, nesting, habitat, both here and in its native country, etc. Some 260,000 birds have been introduced into the United States with varying success and very few definite records are available as to their fate. The author finds the bird better adapted to conditions in intensively farmed areas than either the Bobwhite or Ruffed Grouse; safer nesting sites and flushing devices on mowing machines are the two most needed provisions for the increase of the species. The author "has failed to find any one factor which might account for the widespread failure of plantings." It would seem to the reviewer that the conservation and artificial breeding of our native game birds will always prove a better investment for sportsmen than the introduction of any foreign species.

Zimmer, John T.—Studies of Peruvian Birds. Nos. XIII, XIV, XV, XVI. (Amer. Mus. Novitates, Nos. 728, 753, 756, 757; May 31, November 10, and November 30, (2) 1934.)—In these studies of the great collection of Peruvian birds in the American Museum Mr. Zimmer has devoted himself to the Dendrocolaptidae and Furnariidae and has described 23 new forms. More important even than this, however, are his discussions of the status and relationship of some fifty other forms which the rich material at his disposal has made possible.

The Ornithological Journals.

Bird-Lore. XXXVII, No. 1. January–February, 1935. (Nat. Asso. Aubudon Soc., 1775 Broadway, New York.)

With this issue 'Bird-Lore' passes from the possession of Dr. Chapman to that of the National Association of Audubon Societies and while he remains as Editor the greater part of the responsibility and management is taken over by Mr. William Vogt, as Associate Editor. The number begins with a series of portraits and brief biographies of Messrs. Kermit Roosevelt, President; John H. Baker, Executive Director; William Vogt, Warren Eaton, Roger Peterson, Lester Walsh and Alexander Sprunt, Jr. who with Robert Allen form the personnel of the reorganized management of the Association.

There follows a sketch of the Red-throated Loon on its nesting grounds by Alfred M. Bailey and the usual Christmas census. Dr. A. A. Allen has one of his interesting bird autobiographies—the Willow Ptarmigan.

The Condor. XXXVII, No. 1. January–February, 1935. (Mus. Vert. Zool., Univ. of Calif., Berkeley, Calif.)

Meeting the Condor on its Own Ground. By Ernest I. Dyer.—No less than seven seen at once on a dead horse, with possibly three others in the air.

Geologic Factors in the Distribution of Birds. By Junea W. Kelly.—The presence of cliffs for nesting purposes and of clay for building material has a definite effect on distribution.

Fire and Bird Populations. By Harold W. Clark.

The Thick-billed Parrot in Southern Arizona. By Alexander Wetmore.

Geographical Distribution and Display Colors of Trochilidae. By A. L. Pickens.

A History of the Bird Colonies of Great Salt Lake. By William H. Behle.

In the shorter notes Grinnell upholds the validity of *Vireo huttoni insularis* Rhoads. from Vancouver Island.

The Wilson Bulletin. XLVI, No. 4. December, 1934. (T. C. Stephens, Morningside Coll., Sioux City, Iowa.)

Reminiscences of the Iowa Ornithological Association. By Carl F. Henning.

Distribution of Black-throated Green Warblers and Wilson's Warblers Wintering in Cameron County, Texas, during the Season of 1933-1934. By L. Irby Davis.

Some Observations on a Pair of Red-tailed Hawks. By P. F. English.

Hurricanes and Subspecific Variation. By Ivan R. Tomkins.

Some Observations on Birds in Southeastern Oklahoma. By A. H. Trowbridge and H. L. Whitaker.

Some Changes in the Breeding Birds of Upshur County, West Virginia. By Maurice Brooks.

Hawks and their Nests in Michigan. By Lawrence Ward.

Bird-Banding. VI, No. 1. January, 1935. (C. B. Floyd, 95 South St., Boston, Mass.)

A Comparison of Winter and Summer Territories and Seasonal Variations of the Tree Sparrow (*Spizella a. arborea*). By Marguerite Heydweiller.—An interesting study covering a winter habitat at Ithaca, N. Y., and a summer station at Churchill, Manitoba. The birds were marked by artificially colored chicken feathers glued to the base of the tail-feathers so that the individuals could be readily identified. Besides territory, the molt, homing, sexual differences, and seasonal variation in weight are discussed.

Seasonal and individual variations in House Sparrows. By John T. Nichols.—An interesting plumage study. Three slightly different types of juvenal plumage are described. Molt of males into the adult plumage extends from August 2 to September 27.

Methods of Trapping Shore Birds. By Seth H. Lowe.—No less than 4618 shore-birds were trapped and banded in five years on Cape Cod, Mass.

Two Labrador Banding Records. By A. O. Gross.—Arctic Tern (*Sterna paradisaea*), banded in the summer of 1928 found dead near the same locality in 1934, showing the return of the species to its nesting ground after the long migration to the coasts of Africa. Black-headed Gull (*L. r. ridibundus*) banded in Holland was killed at Makovik, Labrador.

The Distribution of Bird-Banding Stations. By O. A. Stevens.—With map. There are now operating in North America 1874 stations of which 297 band upwards of 100 birds a year.

Bulletin of the Essex County Ornithological Club. No. 16. 1934. (S. G. Emilio, Peabody Mus., Salem, Mass.)

The Trials of a Near-Ornithologist. By F. H. Kennard.—Summarizes the changes in the names and arrangement of the Juncos with regard to three New England specimens of western races.

The Shooting Season of 1934 in Essex County. By Edward Babson.

Ipswich River Bird Trip 1934. By Ralph Lawson.

On the Trail of the Pileated Woodpecker in Boxford. By R. E. Wolfe.

Many other local notes and the usual summary of birds observed during the year. S. G. Emilio has added a useful "field list" for use in Essex County. On one, the right hand, page is a list of species with squares for recording 12 days' records and facing this is a chart showing the period of recorded occurrence and the rarity etc. of each species. Ten pages are required for the entire list, but the advantage of having the local history of each species before the observer at the time the bird is seen will eliminate many an error. The little pocket cards, so frequently used, in which everything is sacrificed to compactness and brevity, are almost useless from a true scientific standpoint. It is the observer who uses a large chart-list like this or an

old fashioned blank note book, where every detail may be recorded, who makes the real contribution to science.

The 'Bulletin' appears this year in photo-lithographic form from type-written sheets; more economical but much harder on the eyes than regular print.

The Oölogist. LI, No. 12. December, 1935. (R. M. Barnes, Lacon, Ill.)

Numerous notes on nesting and occurrence of unusual birds in various parts of the country.

The Cardinal. IV, No. 1. January, 1935. (B. H. Christy, Sewickley, Pa.)

An Expedition to the Big Bend Country. By George M. Sutton.—Report on a trip to the Chisos Mts., Texas; a specimen as well as a nest and eggs of *Vermivora crissalis* were secured.

City Sparrow Hawks. By Bayard H. Christy.—Nesting on a high building in the heart of Pittsburgh.

Hummingbird Habits. By Carl W. Schlag.—Detailed observations on nesting and feeding birds. Much original information presented.

The Migrant. V, No. 4. December, 1934. (V. Sharp, Jr., 220 Capital Blvd., Nashville, Tenn.)

The Nesting Birds of Northeastern Tennessee. By Robert B. Lyle and Bruce P. Tyler.—An annotated list of over one hundred species.

Woodcock Notes. By Dan R. Gray.

Many other local notes on Tennessee birds.

Iowa Bird Life. IV, No. 4. December, 1934. (F. J. Pierce, Winthrop, Iowa.)

The Field Trip. By T. C. Stephens.—Timely suggestions on methods and equipment.

Many local notes including data on Harlan's and Krider's Hawks.

The Gull. XVI, Nos. 9, 10, 11, 12. September—December, 1934. (Mrs. A. B. Stephens, 1695 Filbert St., San Francisco, Calif.)

Some Interesting Water Ouzel Nests. By Mrs. C. W. Lockerbie. (September.) Birds of the Cazadero Region. By Laura A. Stephens. (October.)

A Swallow Community—Bank and Cliff Swallows near Salt Lake City.

Red Phalaropes. By Harry E. Parmenter.—Numerous observations about San Francisco.

The Following Mimeographed Journals contain many notes of interest for the regions to which they are devoted.

The Raven. V, Nos. 9 and 10; VI, No. 1. Oct.—Nov., Dec. 1934 and Jan. 1935. (Dr. J. J. Murray, Lynchburg, Va.)—The editor describes Birds of an Ocean Crossing and Birds of the New Forest of England.

Jack-Pine Warbler. (Bull. of the Michigan Audubon Society, F. L. DuMond, Kent Museum, Grand Rapids, Mich.)

The Redstart. II, Nos. 3, 4, 5. December, 1934—February, 1935. (Brooks Bird Club, Oglebay Park, Wheeling, W. Va.)

West Virginia Additions and Corrections to the A. O. U. Check-List. By Maurice Brooks.—This excellent list will be of the greatest value to the compilers of the next Check-List whenever that may be undertaken in the future. We trust that other local publications may follow Mr. Brooks's example.

The Night Heron. II, Nos. 10–11 and 12. Oct.—Nov. and December, 1934. (John O. Felker, 8 Fair Oaks, St. Louis Co., Mo.)

The Flicker. Vol. 6, No. 4. December, 1934. (Minnesota Bird Club, Ralph Woosly, 23 S. Terrace, Fargo, N. Dakota.)

The Cerulean Warbler in Minnesota. By C. C. Prosser.

News from the Bird-Banders. IX, No. 4. November, 1934. (Western Bird-Banding Association, Museum Vert. Zool. Berkeley, Calif.)

Inland Bird-Banding News. VI, No. 4. December, 1934. (E. R. Ford, Chicago Acad. Sciences, Chicago, Ill.)

St. Louis Bird Club Bulletin. III, No. 9; IV, No. 1. December, 1934 and January, 1935. (T. M. Kirksey, 33, Arundel Place, St. Louis, Mo.)

Long Island Bird Notes. (A weekly news letter published at Woodmere Academy, Woodmere, N. Y.)

News Letter of the Audubon Society of Missouri. (No address published.)

Toledo Field Naturalists' Association. 1934 Bulletin. (No address given, apply Louis W. Campbell, 304 Fearing Blvd., Toledo, Ohio.)

The Ibis (13 ser.). V, No. 1. January, 1935. (Taylor and Francis, Red Lion Court, Fleet St., London, E. C. 4.)

The Birds of Portuguese East Africa, Pt. VI. By Jack Vincent.

Notes on Some New or Rarely Recorded Burmese Birds. Pt. I. By J. K. Stanford and C. B. Ticehurst.

Notes on the Birds of Cape Horn. By P. W. Reynolds.

Notes on Birds from Northern Nigeria. By P. A. Buxton.

Ornithological Results of a Trip to Syria and Adjacent Countries in 1933. By Col. R. Meinertzhagen.

On a Collection of Birds from Northwestern Abyssinia. By R. E. Cheesman assisted by W. L. Sclater.

Bulletin of the British Ornithologists' Club. No. CCCLXXXI. November 30, 1934. (D. G. Carmichael Low, 86 Brook St., Grosvenor S. W., London W. I.)

Account of the annual meeting with the president's address.

There are accounts of the nestling Jack Snipe; birds of Nyassaland, races of *Motacilla cinerea*; West African birds of the Danish Sudan Expedition of 1927.

Bulletin of the British Ornithologists' Club. No. CCCLXXXII. December, 1934.

Col. Meinertzhagen discusses the European Crossbills and describes a new Sandgrouse, *Pterocles orientalis koslovae* (p. 59); Marquess Hachisuka discusses *Leonardina woodi* and its allies as well as *Emberiza janowskii* and *Locustella pleskei*; C. H. B. Grant and C. W. Mackworth-Praed have a number of notes on African birds and describe *Francolinus nobilis chapini* (p. 59) from Ruwenzori (further notes in the next issue); Oscar Neumann describes *Pterocles lichtensteinii nigriceps* (p. 72) and *P. orientalis enigmatus* (p. 73); G. M. Mathews proposes two new genera of Penguins *Catadyptes* for *Catarractes chrysolophus* (p. 74) and *Dasytelus* (p. 74) for *Aptenodytes antarctica*; Jack Vincent presents notes on *Lophoceros melanoleucus*; W. Thesiger and M. Meynell describe *Cercomela melanura aussae* (p. 79) and *Fringillaria striolata dankali* (p. 79), from the Danakil country of Abyssinia; and C. G. Bird discusses *Aegialitis septentrionalis*.

Bulletin of the British Ornithologists' Club. CCCLXXXIII. January, 1935.

Jack Vincent corrects the type localities for 14 species in the 'Systema Avium Aethiopicarum'; J. Delacour presents a summary of the forms of *Mixornis*; G. M. Mathews and T. Iredale discuss the nomenclature of certain Penguins and propose *Aptenodytes excelsior* (p. 101) for the species figured by Mathews as *A. forsteri* and describe *Catadyptes chrysolophus redimitus* (p. 102) from Macquarie Island.

There is a discussion in this and the two preceding issues as to the rules and ethics of renaming a preoccupied name when the original author is still living.

British Birds. XXVIII, No. 7. December, 1934. (326 High Holborn, London, W. C. 1).

The Names of the Song-Thrushes. By H. F. Witherby.—*Turdus ericetorum* Turton 1807, proves to be the earliest name for the British race, and indeed for any of the races, so that it becomes the specific name for the group, the British bird being *T. e. ericetorum* and the continental one *T. e. philomelus* Brehm.

Razor-bills Infected with Flukes. By P. R. Lowe.—Fifteen picked up dead, due to the presence of these worms.

Territory in the Great Crested Grebe. By L. S. V. Venables and David Lack.—Show that "territorial behaviour at times limits the population density but bears no direct relation to the food supply."

Plumage Changes Observed in an Iceland Gull. By H. Tetley.

British Birds. XXVIII, No. 8. January, 1935.

On the Display, Nesting and Habits of the Sheld-Duck. By Henry Boase.

A Fly Parasitic on the Swallow. By A. W. Boyd.—The blood-sucking larvae of a blue-bottle fly attach themselves to the nestlings.

Excavation of Nesting Hole and Incubation of Crested Tit. By W. M. Ross.

Lapland and Other Buntings on the Pennines in Winter. By John Armitage.

The Skins and Eggs of the Great Auk. By F. C. R. Jourdain.—Account of the sale of two birds and six eggs from the Rowley collection. The former brought 480 and 500 guineas and the eggs from 100 to 300 guineas according to condition. While there is some doubt as to the number of specimens now extant the birds are supposed to be 79 or 80 while of eggs there are apparently 75.

British Birds. XXVIII, No. 9. February, 1935.

Great Crested Grebes at the Tring Reservoirs. By Chas. Oldham.

The Food of Certain Birds of Prey. By R. H. Brown.—List of species of birds and mammals found at eyries.

Time of Singing of the Goatsucker. By S. E. Ashmore.—Morning song begins, on the average, 50 minutes before sunrise and the evening song 35 minutes after sunset.

Birds Seen in the North Atlantic. August and September, 1934. By K. B. Rooke.—On two trips, Liverpool to St. John's, Newfoundland, Interesting for comparison with Wynne-Edwards' recent paper (see ante p. 000).

The Oölogists' Record. XIV, No. 4. December, 1934. (Kenneth L. Skinner, Brookland Estate Office, Waybridge, Surrey, England.)

D. Nethersole-Thompson continues his discussion of the Territory Theory presenting Howard's claims, Lacks's criticisms, and his own views.

There is also a full account of the sale of the Rowley collection of eggs, etc., and several shorter notes.

The Avicultural Magazine. XII, No. 12. December, 1934. XIII, Nos. 1 and 2, January and February, 1935. (Miss Knobel, 86 Regent's Park Road, London, N. W. 1.)

Sydney Porter has notes on the *Cyanoramphus* Parrakeets (Dec.) and on New Zealand birds (Feb.) and a further attack on the Whitney South Sea Expedition for alleged excessive collecting. His statements are based wholly upon the allegations of residents which he admits he is quite unable to prove and are in direct contradiction of the reply of Dr. F. M. Chapman which gives the facts of the case! While we are all unanimous so far as preventing the extermination of any species it seems foolish to continue charges which have no tangible backing.

A. Morrison reviews the genus *Sporophila* (Jan. and Feb.) and E. Hopkinson lists many additions to breeding records. There are numerous avicultural notes.

Bird Notes and News. XVI, No. 4. Winter, 1934. (82, Victoria St., London, S. W. 1.)

A Short Trip to the Outer Hebrides. By A. Holte Macpherson.

A "Side-Line" of Ornithology. By E. St. G. Betts.—On ability to identify contents of Owl pellets.

Many interesting articles on bird protection in England and elsewhere—the oil menace, excessive egg collecting, saving the fauna of Africa, etc.

The Emu. XXXIV, Part 3. January, 1935. (168 Latrobe St. Melbourne, Australia.)

The Painted Honeyeater. By K. A. Hinwood.—With color plate.

Some Habits of the Southern Stone Curlew. By J. Bright.

Birds of the Musgrave Ranges. By J. Neil McGilp.

On the Habits of the Spine-tailed Log-Runner. By Ellis McNamara.

Birds Inhabiting Mangroves in the Neighborhood of Sydney. By K. A. Hinwood

On the Birds of the McPherson Ranges. By A. J. Marshall.

Notes on Two Masked Owl Nestlings. By A. J. Elliott.

The Seasonal Movements and Migrations of Birds in Eastern New South Wales. By P. A. Gilbert.

L'Oiseau. IV, No. 4. 1934. (25 Rue La Condamine (XVII), Paris.) [In French] Systema Avium Rossicarum. By S. A. Buturlin and G. P. Dementiev. The third part of this important publication is presented.

Contribution to a Study of the Distribution of Birds in West Africa. By Dr. G. Bouet.—Considers the Forest of Southern Cameroon.

The Third Meeting of the International Game Conference. By F. Edmond-Blanc.

The Ornithology of Lower Brittany. By E. Lebeurier and J. Rapine.

Experiments on the Heredity of the Varieties of *Melopsittacus undulatus*. By H. Steiner.

A Visit to the Herony of Clairmarais. By A. Labitte.

Notes on Aviculture.

Archives of Swiss Ornithology. I, Fasc. 5. October, 1934. (Spitalgasse, 26, Bern, Switzerland.) [In German or French.]

Analysis of the Migration of the Pintail, Widgeon and Gadwall in Switzerland. By U. A. Corti.

Family Associations of our Birds. By H. Noll.

Observations on Emberiza cincia. By H. Jouard.

Der Ornithologische Beobachter. 32, Heft 1. December, 1934. (Spitalgasse, 26, Bern, Switzerland.) [In German or French.]

The Year's Review. By U. A. Corti.

Twenty-fifth Anniversary of the Swiss Society for the Protection of Birds.

Der Ornithologische Beobachter. 32, Heft 2. January, 1935.

Further Observations on Banding Swiss Titmice. By A. Schifferli.

Additional Discussion. By W. Rüppell.

Researches of Dr. N. Vasvari on the Food of Birds.—The Purple Heron. By O. Meylan.

Le Gerfaut. 24, Fasc. 3, 1934. (Square Prince Charles, 21, Bruselles-Laeken, Belgium.) [In French.]

Ornithological Observations in Belgium, 1933–1934. By C. Dupond.

Many Bird Banding Records.

Journal für Ornithologie. 83, Heft 1. January, 1935. (R. Friedlander & Sohn, Berlin 6, Karlstr. 11, Germany.) [In German.]

Contributions to the Study of Breeding Habits of Brazilian Birds. By the late Emilie Snethlage.

Contributions to Our Knowledge of the Birds of Asia-Minor. By H. Kummerlowe and G. Niethammer.—Completed.

Why does the Stork Drive its Young from the Nest.—A study of its parasites. By L. Szidat.

The Honey Buzzard (*Pernis apivorus*). By Victor Wendland.

Brooding of the Honey Buzzard. By Kurt Gentz.—This and the preceding constitute a detailed life history study illustrated by a number of beautiful photographs.

Colymbus, *Hesperornis*, *Podiceps*: A Comparison of their Posterior Extremities. By Max Stolpe.

Ornithologische Monatsberichte. 42, No. 6. November—December, 1934. (R. Friedlander & Sohn, Berlin N. W. 6, Karlstr. 11, Germany.) [In German.]

On the Progress of *Coturnix coturnix* in 1934. By E. Schuz.

Breeding Studies of Pomeranian Birds. By Paul Robien.

Bird-Banding in Northern Angola. By Helmut Sick.

There is a valuable bibliography compiled by J. Steinbacher of ornithological articles in non-ornithological publications.

Ornithologische Monatsberichte. 43, No. 1. January—February, 1935. [In German.]

Biological Observations on the African Pygmy Falcon (*Poliohierax semitorquatus*). By W. Hoesch.

Remarks on the Songs of Some Birds of the Highlands of Guatemala. By Fritz Heilfurth.

The Drinking of Hummingbirds. By Georg Steinbacher.—With diagrams of cross sections through the bill and tongue.

On the Systematic Status of *Dryobates leucopterus*. By B. Stegmann.—Is a subspecies of *major*; but in a following paper on "Difference in Ecologic Condition as a Taxonomic Criterion" he shows apparent specific difference.

The Palearctic Forms of the Mew Gull. By B. Stegmann.

Bat Migration and Bat-Banding. By M. Eisentraut.—With bats in ornithology we apparently go back to the Book of Genesis where the bat is listed among the birds! However, here is an important opportunity for bird-banders.

Der Vogelzug. No. 1. January, 1935. (R. Friedlander & Sohn, Berlin N. W. 7, Karlstr. 11, Germany.) [In German.]

A Contribution to the Subject 'Bird Migration and Electricity.' By J. B. Besserer and R. Drost.

Some Observations on Spring Migration on the Bosphorus. By H. Kummerlowe and G. Niethammer.

The Migration of *Falco tinnunculus*, *F. peregrinus* and *F. subbuteo*. By J. Heidemann.—With maps.

Bird Migration and Moonlight. By R. Drost.

On the Migration of the Jackdaw. By E. Schüz.

Beiträge zur Fortpflanzungsbiologie der Vögel. X, No. 6. November, 1934. (L. Schuster, Berlin-Sudende, Hunefeldstrasse, 24, Germany.) [In German.]

Breeding and Hunting of the Wood Owls in the Berlin Zoo. By Otto Schnurer.

On an Eyrie of the Peregrine in Bird Colonies. By H. Grote.

Some Observations on *Elanus caeruleus hypoleucus* Gould. By A. Spennemann.

Beiträge zur Fortpflanzungsbiologie der Vögel. II, No. 1. January, 1935.

Observations on a Spoonbill Colony in Zwannenwater (Holland). By Fr. Haverschmidt.—With excellent photographs.

On the Song of *Acrocephalus aquaticus* and *A. paludicola*. By E. Christoleit.

Numerous notes on breeding habits and nests.

Ardea. XXIII, Afl. 3-4. December, 1934. (G. A. Brouwer, Petrus Camper-singel, 239, Groningen, Netherlands.) [In Dutch or English.]

Larus canus Nesting on Trees. By Jan P. Strijbos.—With beautiful photographs.

Observations on Cuban Birds. By M. Rutten.—Account of a trip to Cuba and annotated list of 107 species. [In English.]

Breeding of *Podiceps ruficollis* in the Oosterpark, Amsterdam. By P. L. Steenhuizen.

Analysis of the Migration of *Carduelis cannabina*. By J. P. Bouma and J. C. Koch.—Based on bird banding.

On the Nesting of *Ciconia ciconia* in Holland in 1934. By Fr. Haverschmidt.

A Difference in Time between the Egg laying of *Larus fuscus* and *L. argentatus* in the Shetlands. By G. C. A. Junge. [In English.]

Results of Bird-Banding by the Natural History Museum at Leiden. By Augustina J. Sleijser, No. XXI.—A long list of recaptures.

Organ of the Netherlands Ornithological Club. VII, No. 1. July, 1934. (N. V. Nauta & Co., Zutphen, Netherlands.) [In Dutch or English.]

Ornithological Results of the Netherland Karakorum Expedition 1929-1930. By J. A. Sillem. [In English.]—Itinerary of this expedition to south Turkestan with maps and annotated list of 155 species.

The East Greenland *Oenanthe o. schioleri* in Netherlands. By J. C. Kock.

Organ of the Netherlands Ornithological Club. VII, No. 2. October, 1934. A Contribution to the Gull Problem. By W. H. Van Dobben.

Organ of the Netherlands Ornithological Club. VII, No. 3. January, 1935.

Summary of Recaptures of Birds Banded in Netherlands. By M. J. Tekke.—The Spoonbill (*Platalea l. leucorodia*).

The Geographic Distribution of the Pyconotidae of Asia and the Indian Archipelago. By Snouckaert van Schauburg.

Ornis Fennica. XI, No. 3. October, 1934. (V. Valli, Centraltatan 4, Helsinki, Finland.) [In Finnish.]

On the Nesting of Herring Gulls on Inland Marshes. By O. Hytönen.

Ornis Fennica. XI, No. 1. March, 1934. [In Finnish.]

On the Arrival of the Partridge (*Perdix perdix*). By Sven Nordberg.

Bird Fauna of Valsörarna. By C. G. Taxell.—An annotated list.

On Nest Building of *Regulus regulus*. By Pontus Palmgren.

Danske-Fugle. XV, No. 4. 1934. (P. Skovgaard, Skovbo pr. Viborg, Denmark.) [In Danish.]

A continuation of an extended account of the Stork with many illustrations and bird-banding records.

El Hornero. V, No. 3. July, 1934. (Secretary of the Sociedad Ornitológica del Plata, Mus. Argent. Cient. Nat., Peru 208, Buenos Aires.) [In Spanish.]

The Argentine Geese. By Jorge Casares.—With colored plate.

Birds of the Valley of Reartes (Cordoba). By Alberto Castellanos.

On Some Birds of Tierra del Fuego. By Percival W. Reynolds.

The Weight of Birds. By A. Fiora (concluded).

On *Rostratula semicollaris* and *Gallinago paraguaiae*. By J. A. Pereyra.

Notes on the nesting of various species with many illustrations including some remarkable nests of *Furnarius*.

OBITUARIES.

DR. ELON HOWARD EATON, an Associate of the American Ornithologists' Union 1895-1906 and elected a Member in 1907, died at his home in Geneva, N. Y., March 27, 1934, from a heart attack following a prolonged illness due to arterio-sclerosis. He was born in Springville, N. Y., October 8, 1866, the son of Luzern and Sophia (Newton) Eaton. He received his early education at Griffiths' Institute at Springville and was graduated with an A. B. degree from the University of Rochester (N. Y.) in 1890. He received the M.A. degree from Rochester in 1893, M.Sc. in 1911 and Sc.D. in 1927. He also did graduate work at Columbia University in 1899-1900.

On September 4, 1909 he was married to Gertrude Yeames of Arlington, Massachusetts, and they had two children, Elizebeth and Elon Howard, Jr. He was married a second time, September 1, 1915, to Ester Woodman of Geneva, N. Y. and to them were born two children, Mary and Steven Woodman.

He was vice-principal and science teacher at the Canandaigua, N. Y., High School 1889-1895, then went to the Bradstreet School, Rochester, N. Y., as master in science 1896-1907. In 1908 he went to Hobart and William Smith Colleges, Geneva, N. Y., as head of the Biology Department and Curator of the Hobart College Museum where he remained until his death.

His interest in ornithology came early in life and his family, thinking him not strong enough to stand steady work in school, bought him a gun and allowed him to roam the fields while they enabled him to take a course in taxidermy at Buffalo, N. Y.

In 1901 he published his 'Birds of Western N. Y.' (Proceedings of the Rochester Academy of Science). He was New York State Ornithologist 1908-1914 and in 1910 was published the first volume of his outstanding work, 'Birds of New York,' Memoir No. 12 of the New York State Museum. The second volume followed in 1914 and in a review in 'The Auk' (Vol. XXXI) the reviewer designated it as "the most comprehensive state ornithology that has yet appeared."

He was appointed to membership on the advisory council of the State Conservation Department and was selected to head a biological survey of the famous Finger Lakes district of western New York which was recognized as one of the most complete investigations of its kind. The results were published in his 'Biological Survey of the Finger Lakes.'

He made warm friendships with the ornithologists and bird lovers of western New York and was loved and revered by his pupils. When he took them afield his knowledge of all nature made him a valuable teacher. Each year in mid-May he led a party of Hobart students in a bird census of Potter Swamp and vicinity. In this he was joined by ornithologists from Geneva, Canandaigua, Rochester, Buffalo, Penn Yan, Branchport and other surrounding towns.

He was a fellow of the American Society for the Advancement of Science, member of the American Society of Mammalogists, American Eugenics Society, American Fern Society, American Fisheries Society, American Forestry Association and Ecological Society of America.—VERDI BURTCHE.

NOTES AND NEWS.

W. H. HOFFSTOT, 14 East 55th Street Terrace, Kansas City, Missouri, has published a circular on 'How to Attract Wild Birds' and 'How to Build a Blue Bird House,' with detailed instructions and figures. "Simple tools; simple directions; easy to make." He does not sell bird boxes or represent dealers, his object being solely to arouse interest in wild song birds, especially Bluebirds.

He will send a copy of his circular to anyone sending him a self addressed, stamped envelope.

RODOLPHE M. DE SCHAUENSEE, Associate Curator of Birds in the Academy of Natural Sciences of Philadelphia, has just returned from a several months sojourn in the mountains of Guatemala where he secured an interesting collection of birds which he has presented to the Academy.

CHESTER C. LAMB of Los Angeles, California, who spent some time in Mexico in 1934, writes from Rosario, Sinaloa, that he expects to remain in Mexico during the present year making a collection of birds.

H. G. DEIGNAN of Washington, D. C., who spent several years collecting birds in Siam has returned to Chiengmai, Siam, to resume his work in that interesting region.

MARCH 7 WAS THE CENTENNIAL of the birth of Daniel Girard Elliot, a founder and former president of the Union, who was born in New York City, March 7, 1835. In honor of the occasion the Library of Congress prepared a special exhibit of Elliot's work. This exhibit included portraits from the Deane Collection, some of his monographs, and scientific publications and other documents in the possession of the Library. Not only were Elliot's publications shown but attention was called to the work of the artists who assisted in illustrating his various monographs.

JUNE 27 WILL MARK the centennial of the birth of Otto Herman, the eminent Hungarian ornithologist, who for some years was a Corresponding Fellow of the Union. He was born in Breznóbánya, Hungary, June 27, 1835, and was the founder of the Royal Hungarian Central Bureau for Ornithology. His portrait and a brief account of his work may be found in 'The Auk' for October 1915, pp. 539-540.

THE COUNTRY IS FLOODED today with literature from various quarters relative to the Duck situation. There is no question but that the Ducks are facing a crisis and unless drastic measures are taken the extermination of certain species is imminent.

Those who desire to secure a clear understanding of the situation should read the address of Chief Darling of the U. S. Biological Survey on "The Wild Life Situation in the United States" published by the Survey.

The fundamental trouble from the viewpoint of the conservationist is that there is not, nor ever has been, a definite comprehensive National policy for the conservation of our wild-life resources nor any one Government agency entrusted with the problem as a whole. The result has been that various agencies in different Departments have been working at cross purposes. In the zeal to provide work for the unemployed large areas of marsh land have been drained and underbrush cut down, under the direction of one agency, while another is trying to accomplish exactly the opposite result in order to maintain breeding grounds for water-fowl and cover for upland game. The Biological Survey has no authority outside its own Bureau and

it would seem that one Bureau or Department does not know what another is doing in activities related to conservation.

The National Association of Audubon Societies is advocating a closed season for Ducks next winter and all broad minded citizens will endorse such a proposal but there must be substantial appropriations made for the enforcement of a closed season and how are they to be obtained? The Biological Survey has, according to Mr. Darling, about one third as many wardens available in the whole United States as there are traffic policemen on Broadway and with some five million licensed gunners, and it is hard to say how many unlicensed, what can such a meagre force accomplish? With such an army in the field, with drought still in force, and with lack of co-operation among Government agencies what chance have the Ducks?

Chief Darling is doing noble work in bringing these conditions before the people and trying to remedy some of them with utterly inadequate appropriations but to meet the present crisis there would seem to be no course but a direct appeal to the President, by all concerned, for drastic action.

THE PRESENT ISSUE CONTAINS A SMALLER number of leading articles in order to make room for the long list of members which has to be published unless omitted by order of the Council. Its compilation is responsible for a delay in the appearance of the issue.

THE AUk

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Index to The Auk. (Vols. I-XVII, 1884-1900) and Bulletin of the Nuttall Ornithological Club (Vols. I-VIII, 1876-1883), 8vo. pp. vii + 426, 1908. Paper, \$3.25.

Index to The Auk. (Vols. XVIII-XXVII, 1901-1910), 8vo. pp. xviii + 250. 1915. Paper, \$2.00.

Index to The Auk. (Vols. XXVIII-XXXVII, 1911-1920), 8vo. pp. xviii + 339. 1929. Cloth \$5.00. Paper \$4.00.

Index to The Auk. (Vols. XXXVIII-XLVII, 1921-1930), 8vo. pp. xxiii + 328, 1934. Cloth \$4.00. Paper 3 00.

Check List of North American Birds. Fourth Edition (latest), entirely revised, 1931. Cloth, 8vo. pp. xix + 526. \$4.00.

Check List of North American Birds. Second Edition, revised, 1895. Cloth, 8vo. pp. xi + 372. \$1.15.

Code of Nomenclature. Revised Edition, 1908. Paper, 8vo. pp. lxxxv. 50 cents.
Original edition. 1892. Paper, 8vo. pp. iv + 72. 25 cents.

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